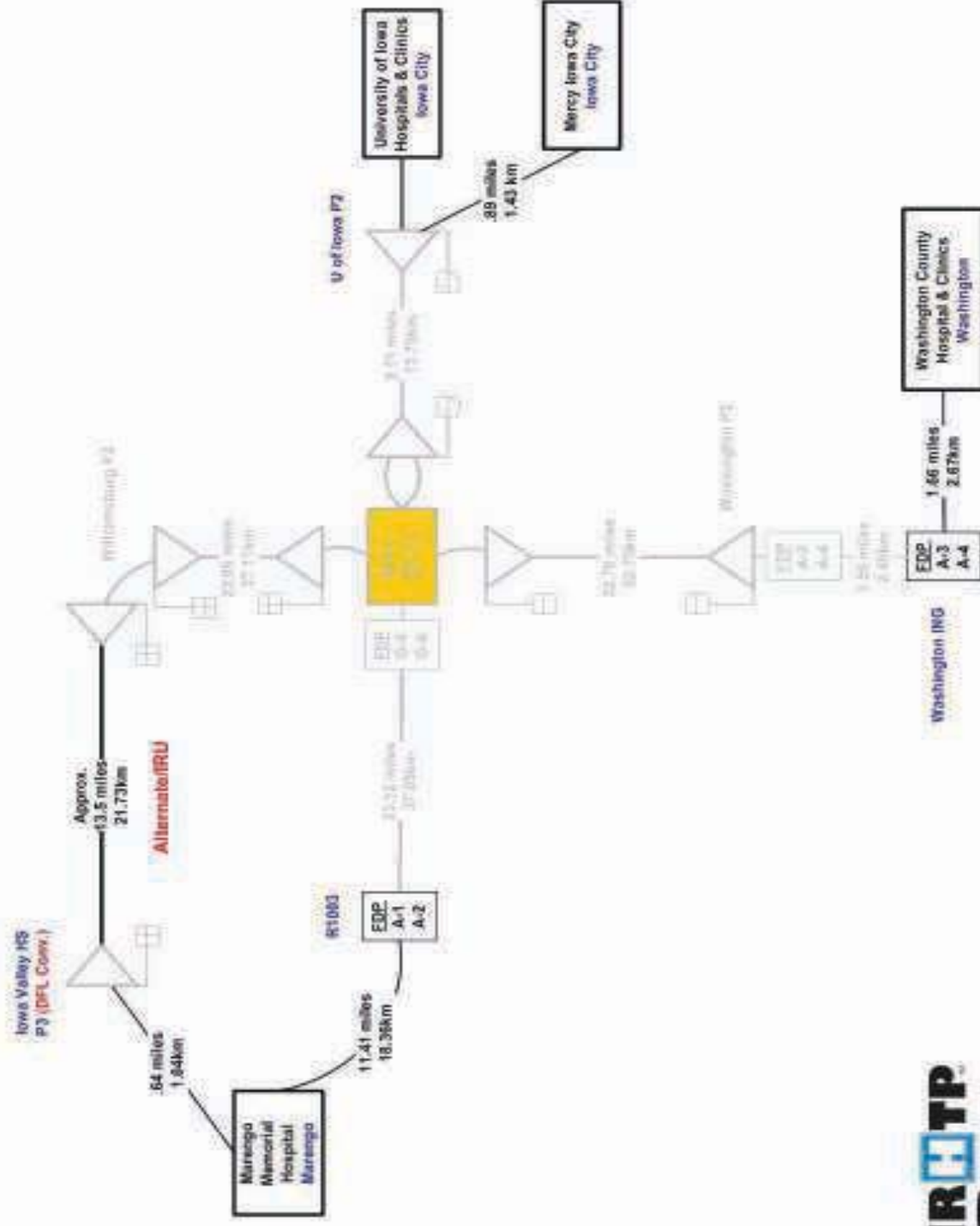
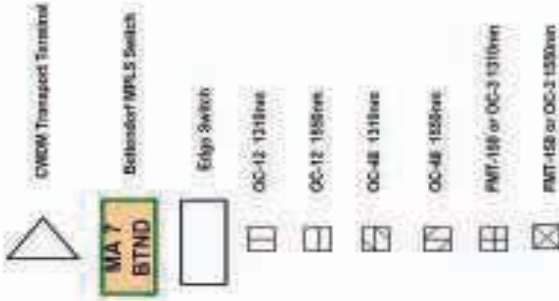
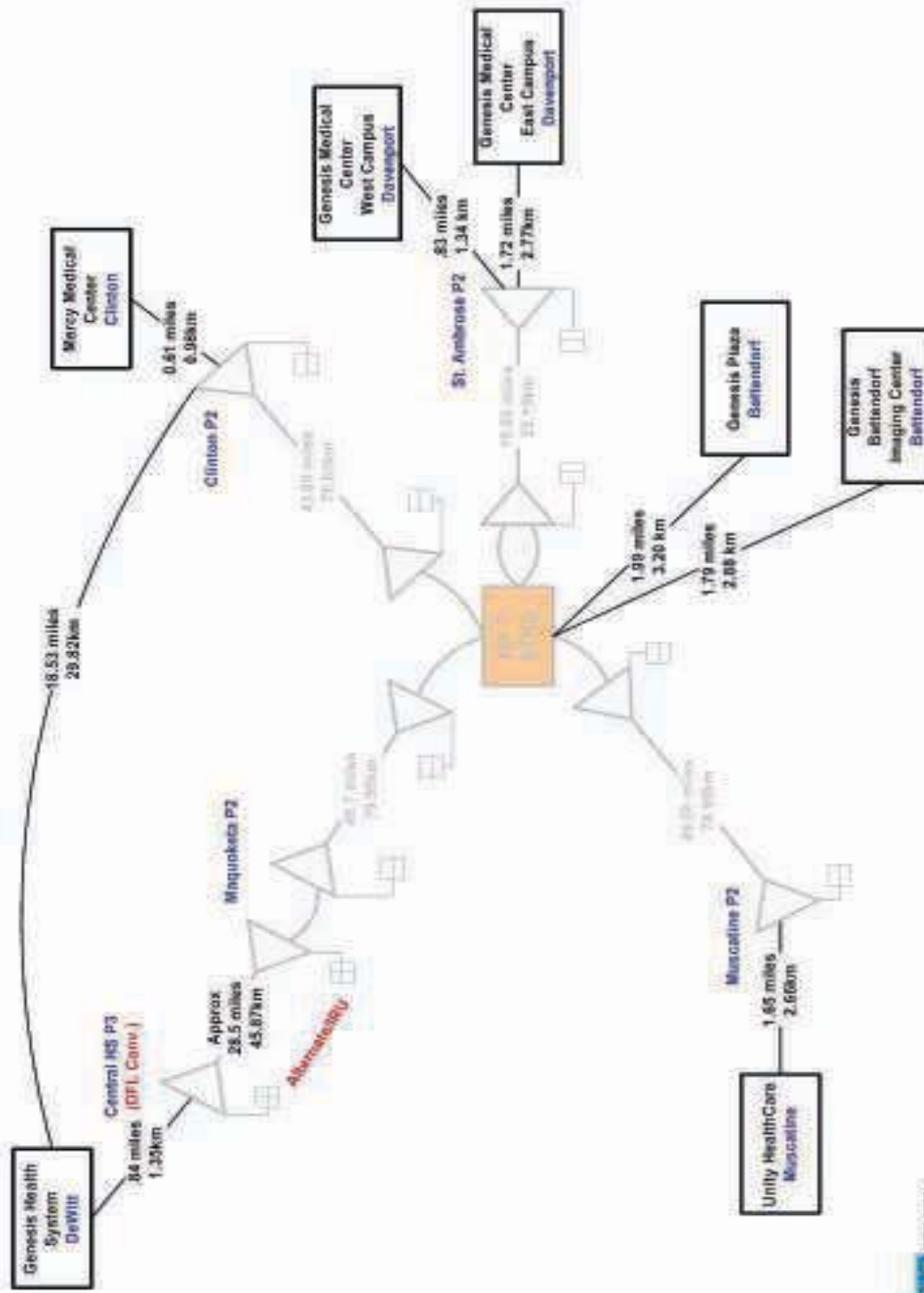


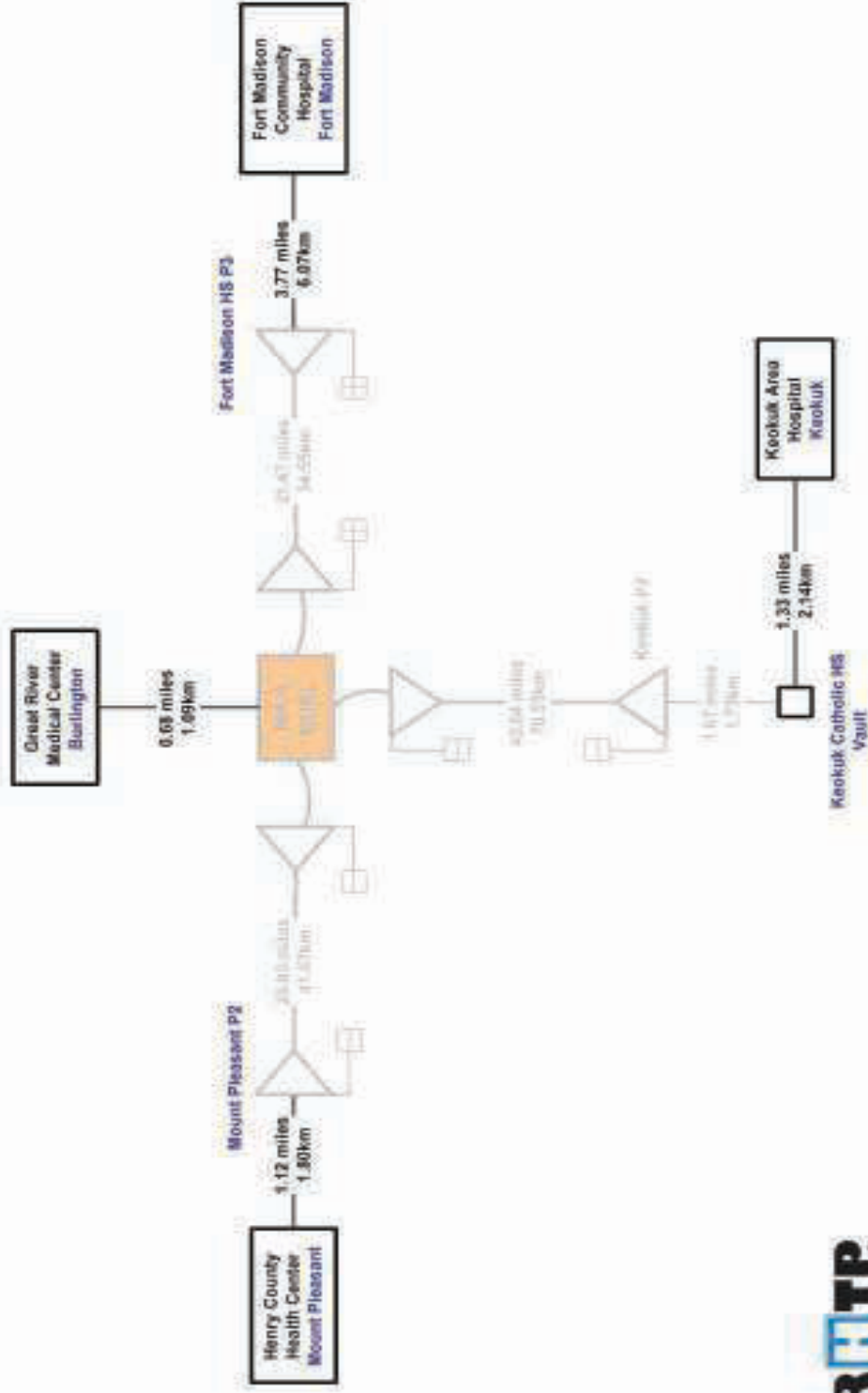
Merged Area # 6 SP 43 Iowa City - Physical Overview



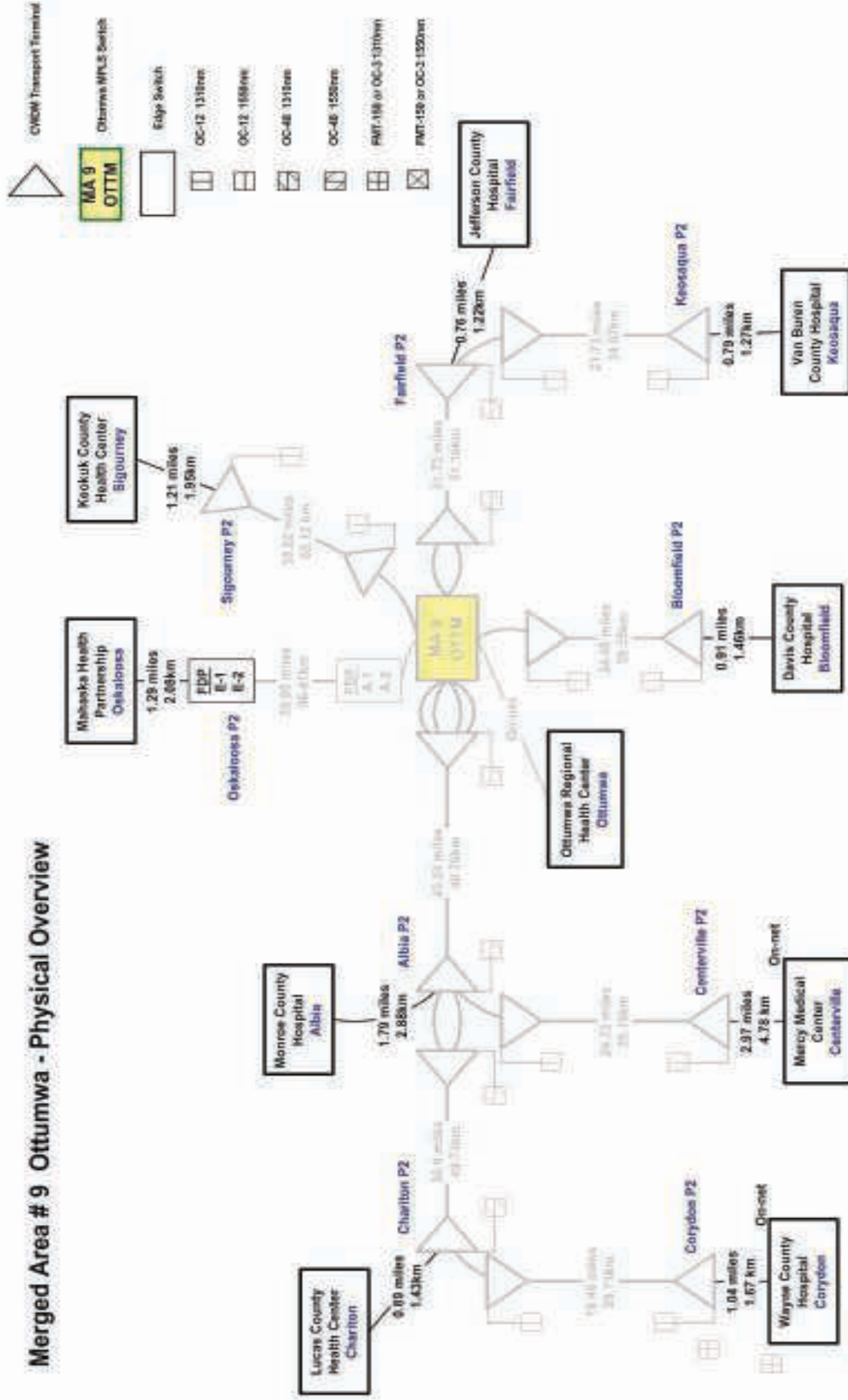
Merged Area # 7 Bettendorf - Physical Overview



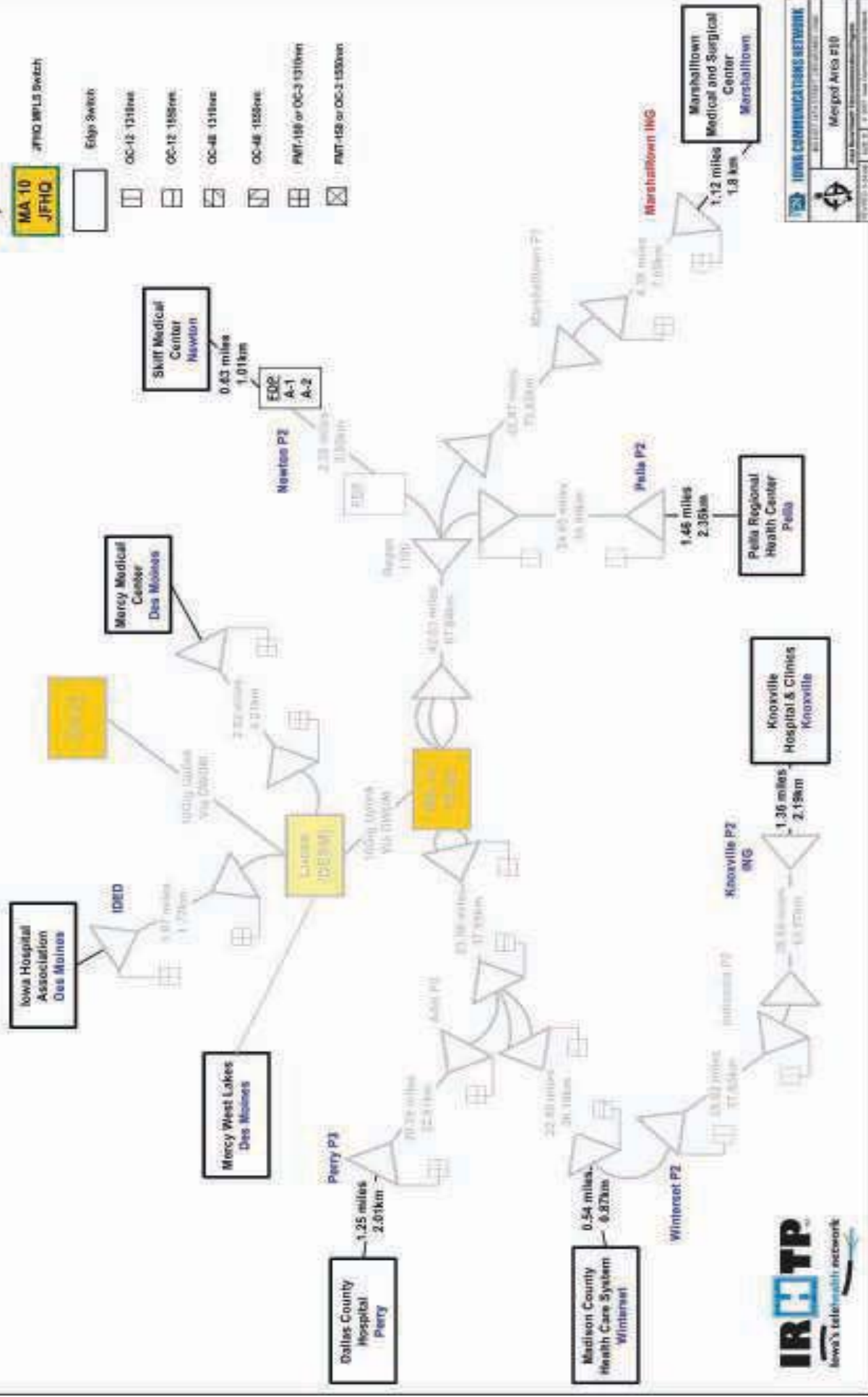
Merged Area # 8 Burlington - Physical Overview



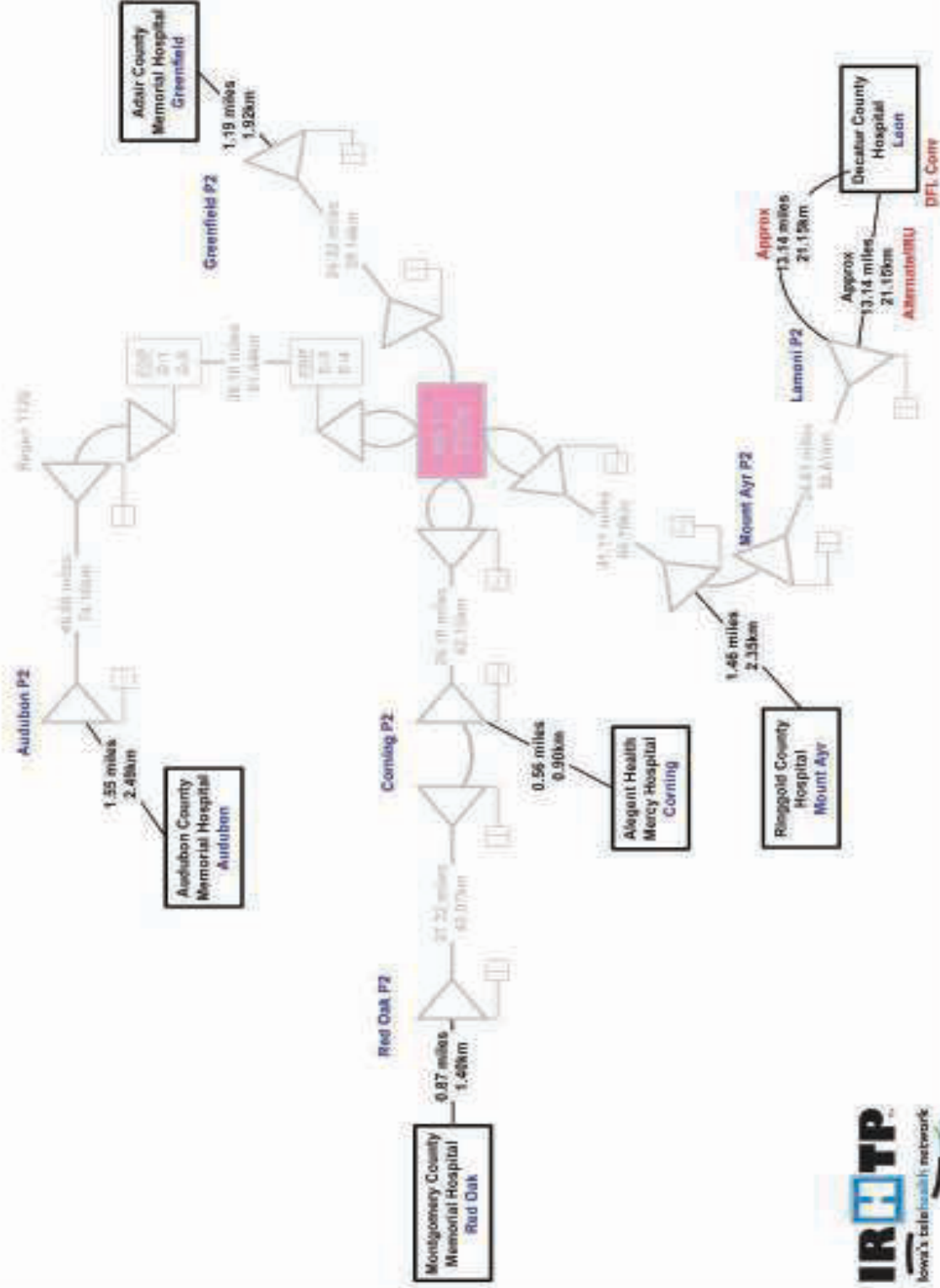
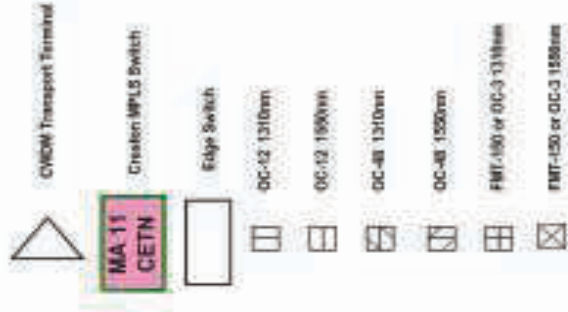
Merged Area # 9 Ottumwa - Physical Overview



Merged Area #10 JFHQ & Lucas - Physical Overview



Merged Area #11 Creston - Physical Overview



IRCTP
 IOWA COMMUNICATIONS NETWORK
 400 EAST 17TH STREET, SUITE 100
 CRESTON, IOWA 52003
 319.338.1234
 www.irctp.org

Comcast
 Merged Area #11
 319.338.1234
 www.comcast.com

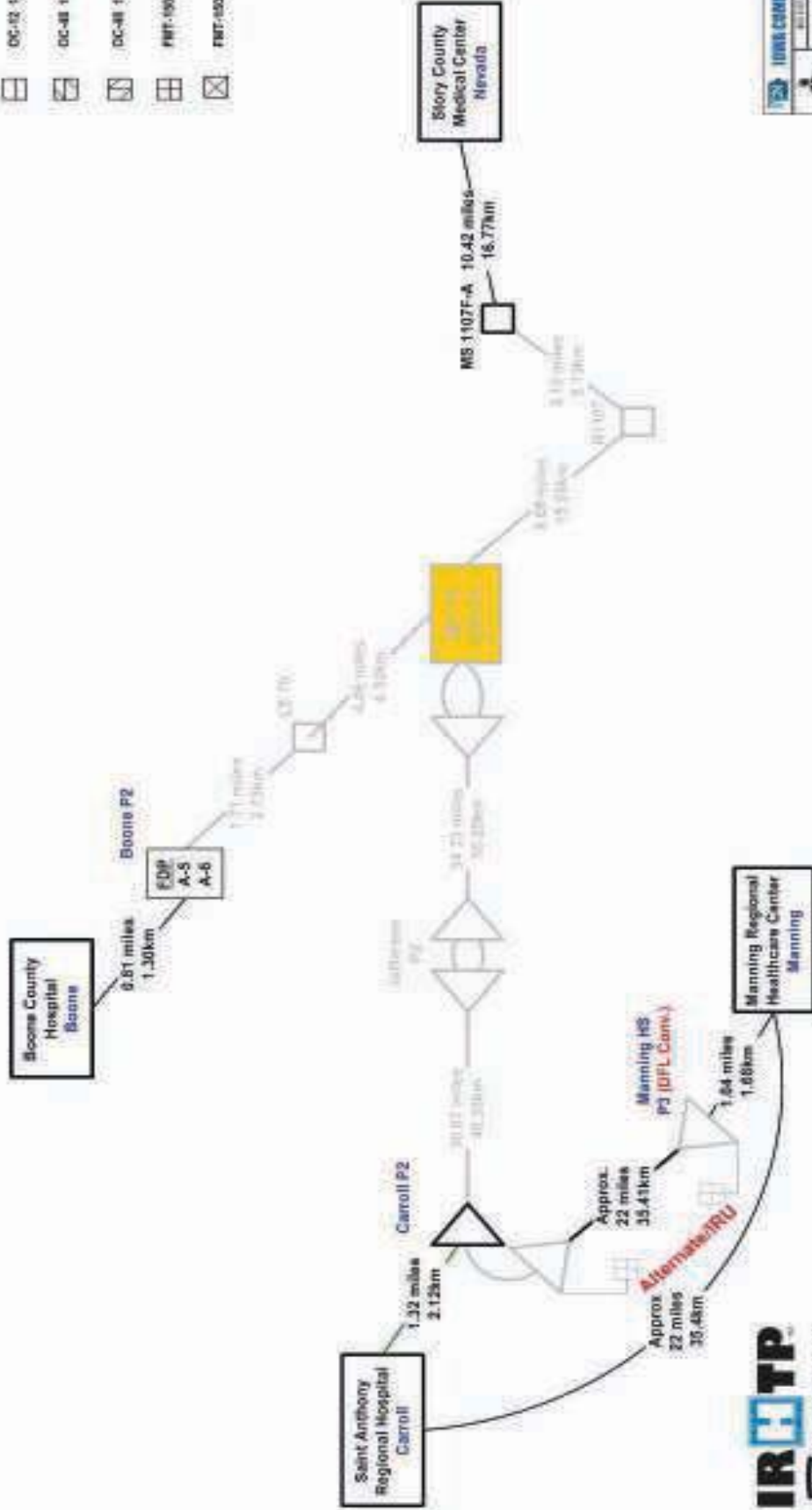
Cytosol Transport Terminal



CNOM Transport Terminal



Merged Area # 14 SP 125 Boone - Physical Overview

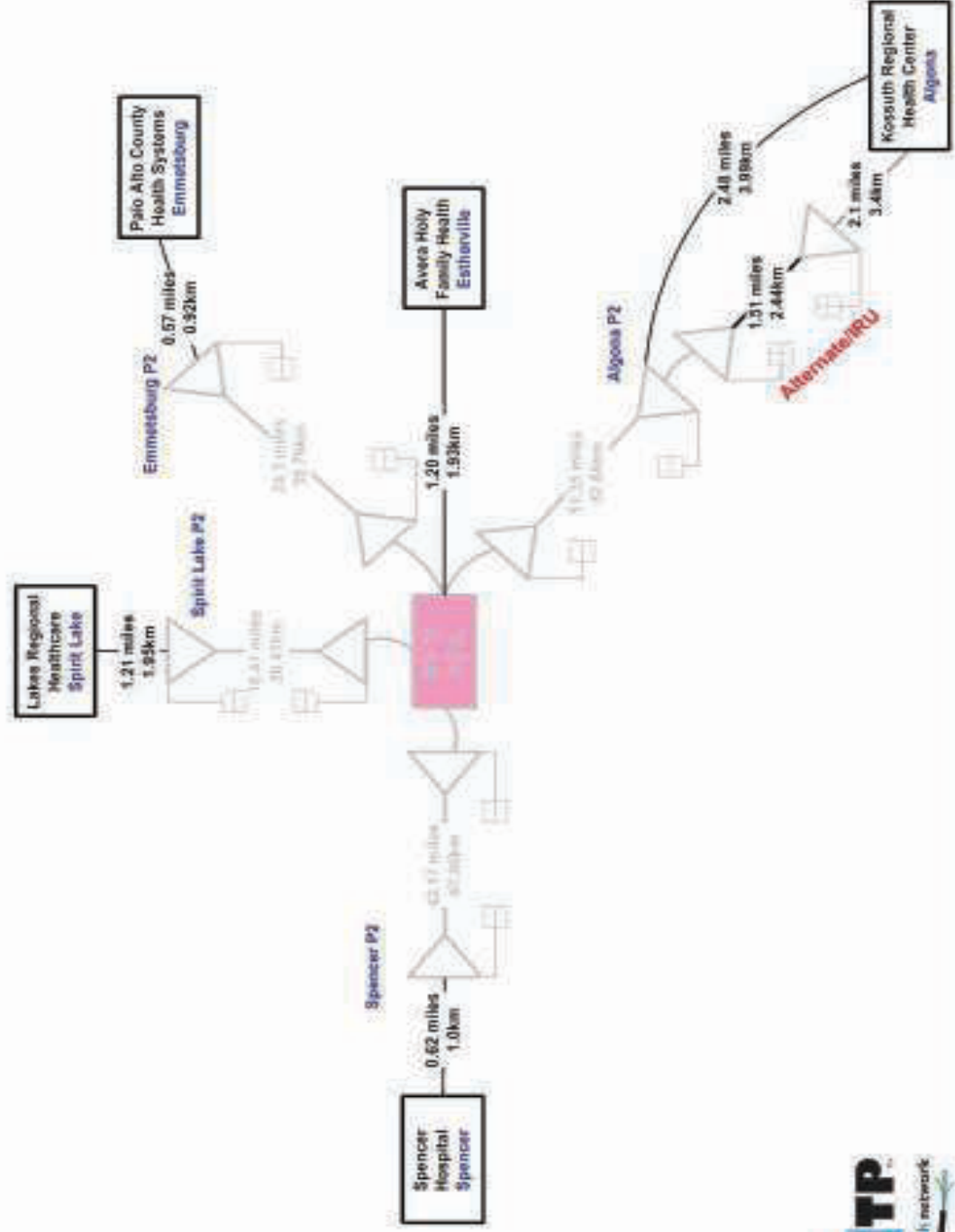
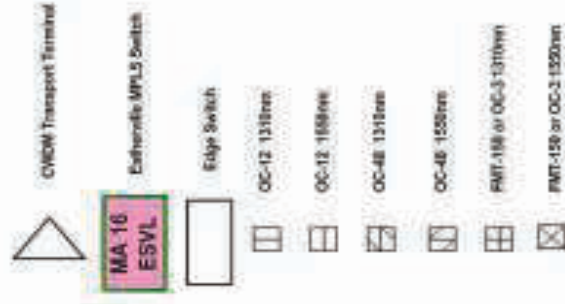


IOWA COMMUNICATIONS NETWORK
 801.227.1231
 801.227.1231
 Merged Area #14
 801.227.1231
 801.227.1231

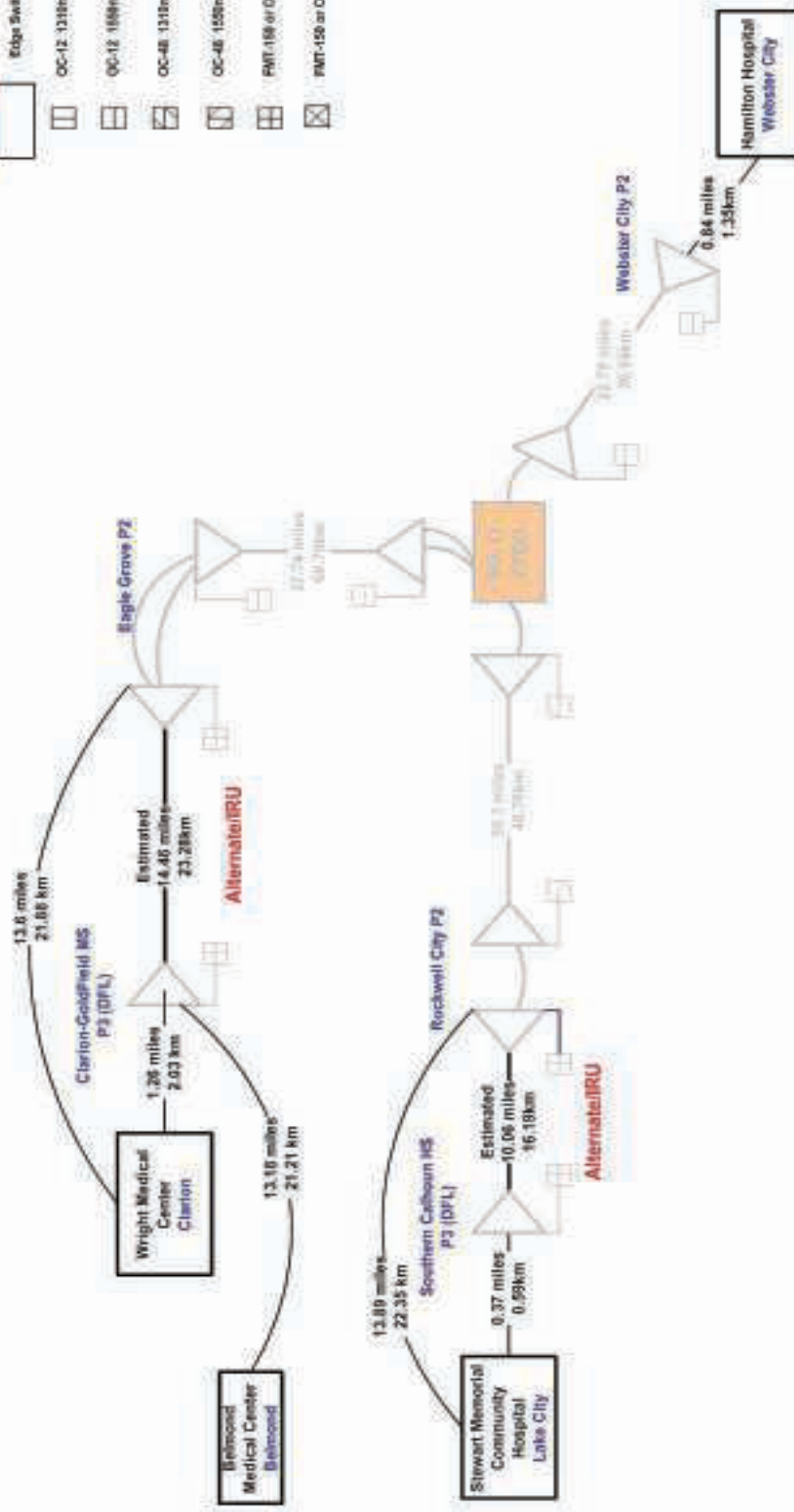
CHROM TRANSPORT TERMINAL



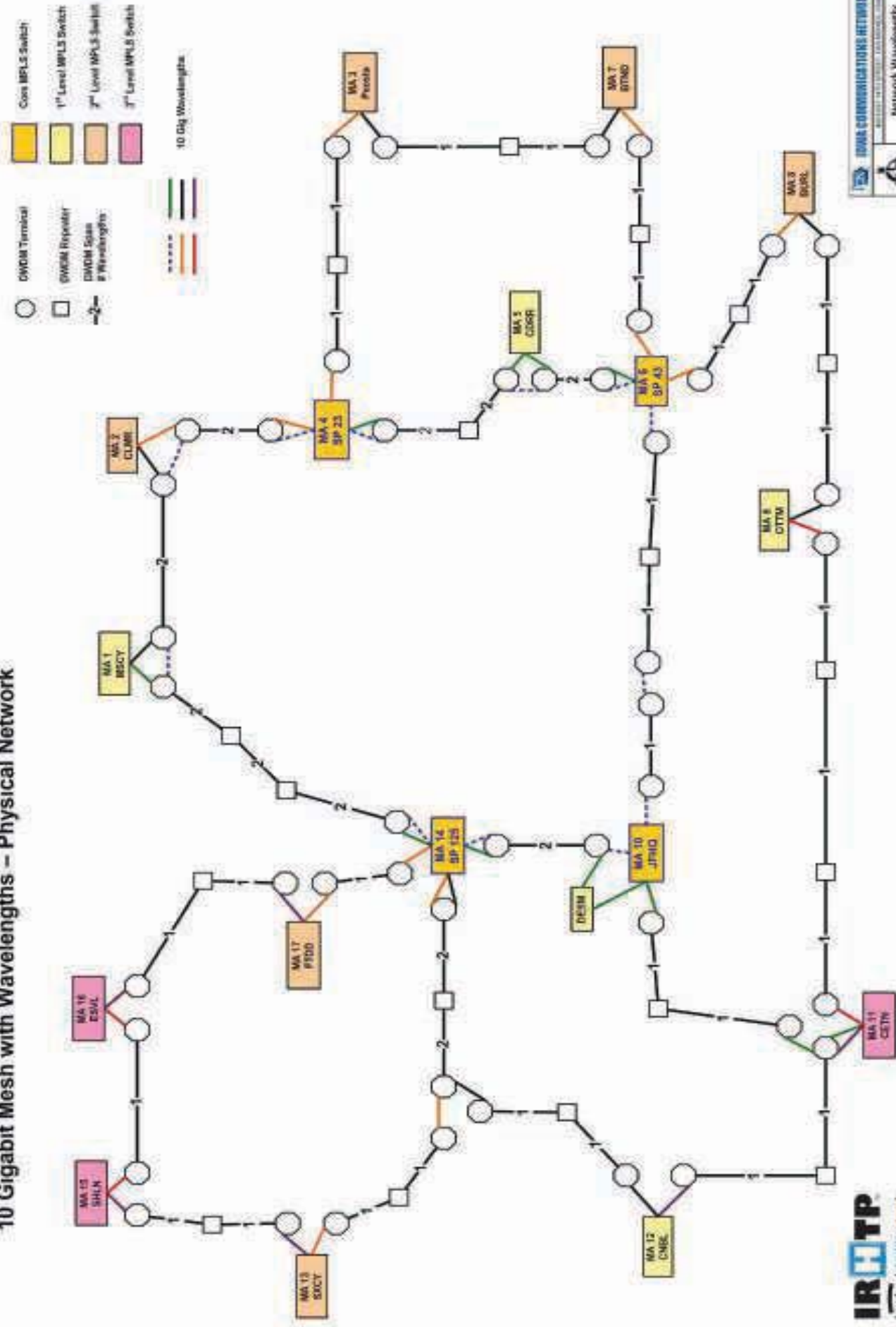
Merged Area # 16 Estherville Physical Overview

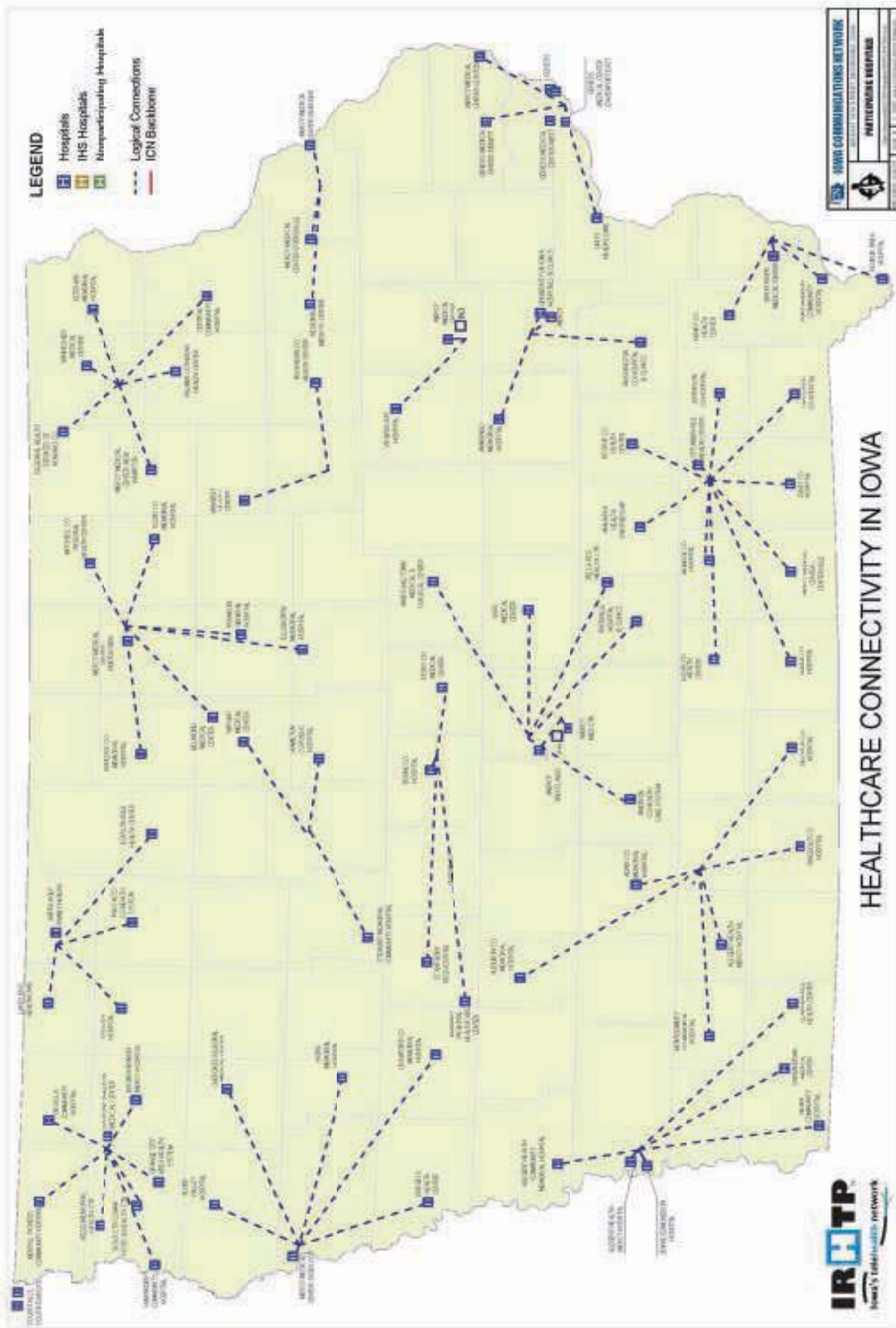


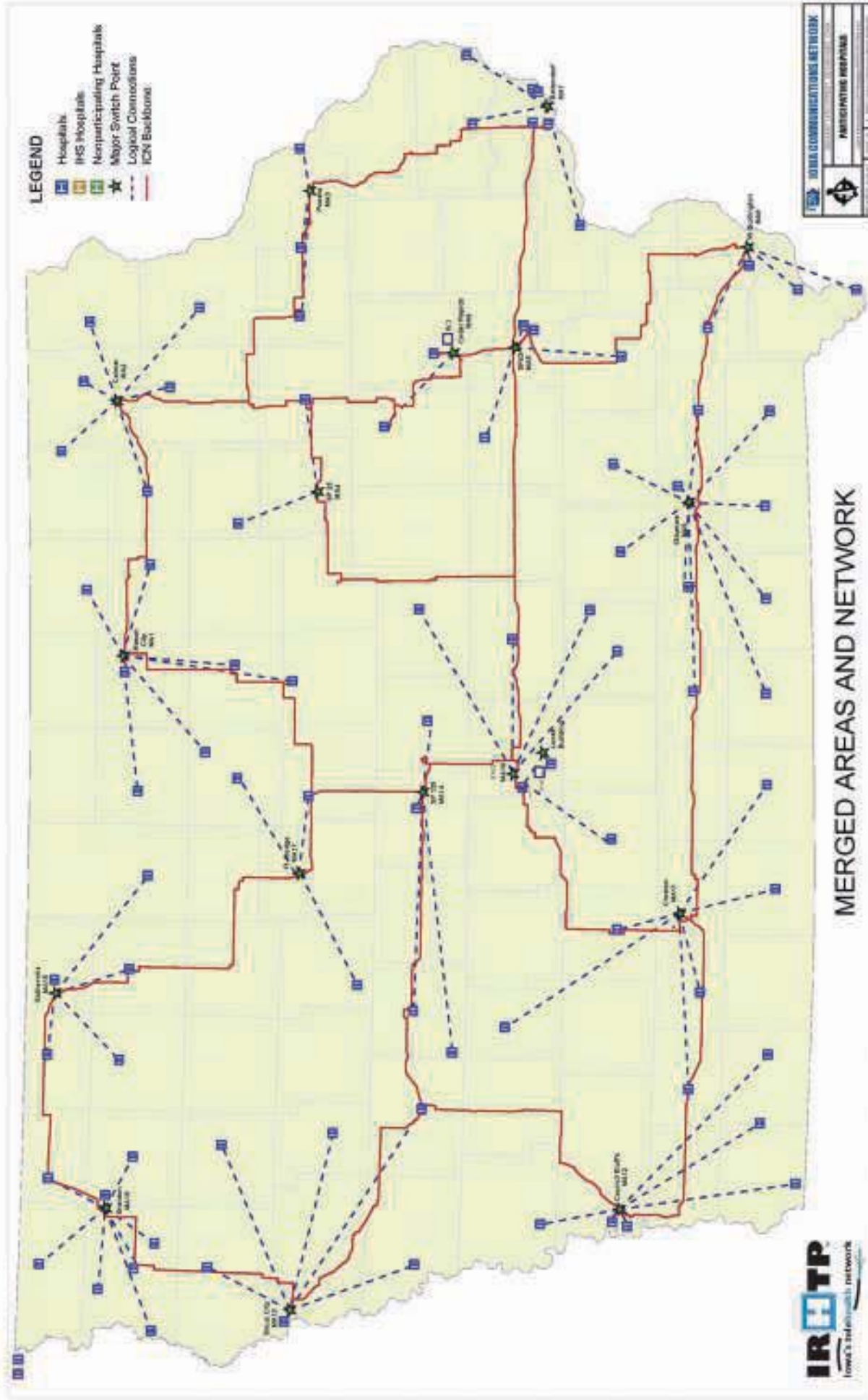
Merged Area # 17 Fort Dodge - Physical Overview



10 Gigabit Mesh with Wavelengths – Physical Network







ANNEX B

DETAILED OUTSIDE PLANT INSTALLATION SPECIFICATIONS

RFP 08-001

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PART 1 - GENERAL REQUIREMENTS

1. INTENT

- 1.1. To supplement the provisions of the **TECHNICAL REQUIREMENTS, SECTION 3.0** by outlining special conditions applicable to project. In the following the term Contractor and Vendor may be interchanged.
- 1.2. To set forth requirements of performance, type of equipment or structure desired, and
- 1.3. Standards of materials and construction.
- 1.4. To describe work set out in Contract Documents, unless otherwise specifically indicated.
- 1.5. To require performance of complete work in spite of omission of specific reference to any minor component parts.
- 1.6. Contractor to provide for new materials and equipment, unless otherwise indicated.

2. LOCATION

- 2.1. Work is located in public right-of-way and easements across private, City, School and
2.1.1.1. Hospital owned properties as located in RFP.

3. RIGHT-OF-WAY

- 3.1. Contractor will obtain permits from departments and/or agencies of cities, state, county, and federal government, railroads, or other entities that provide for the placement of facilities within their respective rights of way, unless otherwise indicated.
- 3.2. Contractor will provide easements for construction on private lands.
 - 3.2.1. All Easements must be IRHTP approved prior to implementation.
 - 3.2.2. It is preferred that all easements be one time, up front payments with no recurring charges.
- 3.3. Confine movements of equipment and personnel, storage of materials, excavation, and all other construction operations within the right-of-way provided.
- 3.4. Contractor will be held liable by Iowa Department of Transportation, City, Schools and adjacent property owners for damages outside rights-of-way and easements; failure of Engineer to warn Contractor about incidence of trespassing does not relieve liability.
- 3.5. Ingress and egress will vary according to right of way agreements. If necessary, the Contractor will provide gates in fences and remove after completion.
- 3.6. On freeways, installation must be accomplished without entering the through traffic roadway or ramps. No vehicles, equipment or materials shall be parked or stored upon any portion of the median, through traffic roadway and ramps or shoulders thereof or within the clear zone.

4. ORDER OF CONSTRUCTION

- 4.1. Provide IRHTP Project Coordinator with proposed a schedule of construction showing start and completion dates. Show each section of construction and the estimated time of completion, to include project complete percentage. This schedule will be "on going process". An update of the aforementioned schedule will be provided to the IRHTP Project Coordinator every week by noon on Friday. This base schedule of work shall detail the activities, tasks and manpower associated with the project. Contractor shall provide to IRHTP a man-load schedule showing all tasks associated with the project, the number of crews, and the crew sizes (number of personnel) available for each task. The schedules shall contain sufficient detail to ensure that the IRHTP can measure project progress at least weekly throughout the project duration. The schedules shall comply with the requirements of the overall project schedule, and shall be updated by the contractor as necessary or as required by IRHTP. Work schedules shall be provided by the contractor within five (5) working days of contract award. Coordinate work with IRHTP Project Coordinator to assure orderly and expeditious progress of the work.
- 4.2. Contractor shall establish schedule of working hours for construction, subject to approval of IRHTP Project Coordinator.

5. INTERRUPTIONS TO SERVICE

- 5.1. Existing utilities will remain in continuous operation during construction.



6. CONSTRUCTION FACILITIES BY CONTRACTOR

- 6.1. Provide telephone at which Contractor can be reached by IRHTP Project Coordinator at all times during the working day; provide liaison between telephone and construction personnel for expeditious handling of messages.
 - 6.1.1. Provide IRHTP Project Coordinator with at least two telephone numbers where Contractor's representative can be reached evenings, weekends and holidays in event of emergency. Place on construction schedule.
- 6.2. Location of all construction facilities including storage yard, subject to approval by IRHTP Project Coordinator; remove all construction facilities upon completion of work.
- 6.3. Provide and maintain suitable sanitary facilities for construction personnel for duration of work; remove upon completion of work.
- 6.4. Provide fence, barricades, and/or watchmen to prevent access of unauthorized persons to site where work is in progress.

7. PLANS, POSITION, LINE AND GRADE

- 7.1. Contractor shall provide IRHTP Project Coordinator with one set of plans and specifications within 15 days after execution of contract unless otherwise stated in RFP.
- 7.2. Contractor shall provide IRHTP Project Coordinator with additional and supplemental plans as may be required to show details of construction after approval of Contractors' drawings and data on materials and equipment.
- 7.3. Contractor will provide IRHTP Project Coordinator with such revised plans and specifications as may be required to show any authorized changes or extra work.
- 7.4. Construct to lines and grades shown on plans or as specified hereinafter.
- 7.5. Contractor will establish required benchmarks and base lines as shown on plans.
- 7.6. Contractor to provide detailed survey and staking for location, and elevation of construction.
- 7.7. Contractor shall provide, without extra compensation, all people and necessary tools to make all test holes and exploration, at any time, for purpose of determining location of existing structures beneath ground surface that might conflict with work of Contractor.
- 7.8. Contractor shall preserve all monuments, reference points, stakes and benchmarks set by other entities. In case of destruction by Contractor's negligence or carelessness, he will be charged with resulting expense of replacement, and responsibility for any mistake or loss of time caused thereby.

8. WORK INCLUDED

- 8.1. Furnish all plans, materials, labor and equipment to construct as set out in the attached plans and/or RFP.

9. STARTING AND COMPLETION TIME

- 9.1. Commence work within 20 calendar days after date set forth in written Notice to Proceed.
- 9.2. Complete work within time set out in Notice of Hearing and Letting.

10. INFORMATION FOR IRHTP PROJECT COORDINATOR

- 10.1. After award of contract, submit the following information and drawings for IRHTP Project Coordinator's review: manufacturer's specifications and catalog data for material and such other data as requested by Engineer.
- 10.2. Within 15 days after award of contract, provide construction schedule showing start and completion of various portions of work and construction plans.
 - 10.2.1. Purchase orders and subcontracts without prices.
 - 10.2.2. All materials test reports.
 - 10.2.3. Proposed equipment and method for boring/jacking; details of boring/jacking pit.
 - 10.2.4. Proposed equipment and method for trenching.
 - 10.2.5. Proposed equipment and method for plowing.
 - 10.2.6. Construction plans, unless otherwise indicated:
 - 10.2.6.1. Location of facility in relationship to established landmarks.

10.2.6.2. Public or private r/w. Furnish a copy of permit and/or easement in IRHTP's name, unless otherwise indicated.

11. PLANS AND SPECIFICATIONS

- 11.1. Contractor will furnish 2 sets of plans and specifications to the IRHTP Project Coordinator after award of contract unless otherwise stated in RFP.
- 11.2. Contractor will provide one set of plans and specifications for each foreman or superintendent in charge of each crew on job.

12. STANDARDS AND CODES

- 12.1. Do work in accordance with best present-day installation and construction practices.
- 12.2. Conform to and test materials in accordance with applicable sections of latest revisions or tentative revisions of following codes and standards unless specifically noted to the contrary.
 - 12.2.1. American Association of State and Highway Transportation Officials (AASHTO)
 - 12.2.2. American National Standards Institute (ANSI)
 - 12.2.3. American Society for Testing and Materials (ASTM)
 - 12.2.4. Iowa Department of Transportation (IDOT); latest edition of standard specifications and addenda.
 - 12.2.5. Federal Specifications (FS)
 - 12.2.6. Occupational Safety and Health Act of 1970 (Public Law 91-596) (OSHA)
 - 12.2.7. Iowa Occupational Safety and Health Act of 1972 (Chapter 88, Code of Iowa 1995) (OSHA).
 - 12.2.8. Standard and codes of the State of Iowa and applicable local standards, codes and ordinances of the particular city where construction is taking place.
 - 12.2.9. Other standards and codes that may be applicable to acceptable standards of the industry for equipment, materials and installation under contract.

13. RESPONSIBILITY OF CONTRACTOR

- 13.1. Protection of Contractor's work.
- 13.2. Protection of all property from injury or loss resulting from Contractor's operations.
- 13.3. Replace or repair objects sustaining any such damage, injury or loss to satisfaction of the IRHTP Project Coordinator.
- 13.4. Without limiting GENERAL REQUIREMENTS of Contract Documents, protect flagpoles, sidewalks, streets, pavements, fences, pipe, conduit, utilities, trees, and shrubs and structures.
- 13.5. Cooperate with IRHTP Project Coordinator and representative of utilities in locating underground utility lines and structures; incorrect, inaccurate or inadequate information concerning location of utilities or structures shall not relieve Contractor of responsibility for damage thereto caused by Contractor's operations.
- 13.6. Contractor will locate underground lines of third parties in the cable route area. Contractor will call Iowa One Call (800-292-8989) prior to any work commencement. Contractor will contact any utilities not participating in the One Call Service, directly. Contractor will hold a single locate "precon meeting" for all utilities. It will be the Contractor's responsibility to document the name, address, phone and fax number of all persons present at meeting plus the locate confirmation number by project. All the aforementioned documentation will be supplied to the IRHTP as part of the "as built" package. Contractor will be responsible for hand digging any crossing such as pipeline, drainage tile, cable or any other buried facility prior to working in the area. Since all drawings are generally diagrammatic and not all utilities are included on them, the Contractor will take every precaution necessary to avoid damage to any underground facility.
- 13.7. Keep cleanup current on a daily basis with construction operations.
- 13.8. Comply with all federal, state, and city laws and ordinances.
- 13.9. Contractor shall assume full responsibility for safekeeping of all materials and equipment and for all unfinished work until final acceptance by IRHTP. Materials and equipment that are damaged or destroyed from any cause shall be replaced at Contractor's expense.
- 13.10. Contractor shall issue written receipts for all such property and account to IRHTP for any damage to or loss of such property while in its custody or control.

- 13.11. If IRHTP is providing warehousing with security for cable, conduit and other OSP materials on a temporary basis; it will be the responsibility of the contractor to arrange for their own storage facilities, and delivery of material from IRHTP warehouses. Should a contractor elect to provide their own storage facilities in their particular area, then contractor will be solely responsible for any materials supplied to that facility by IRHTP. IRHTP may require the Subcontractor to furnish Builders Risk Insurance for this material at the contractor's expense. Security for the job site areas is the responsibility of the contractor. Subcontractor is to comply with the security requirements of owner's site security and other applicable entities.
- 13.12. Contractor shall indemnify and hold harmless IRHTP against any liens filed for non-payment of Contractor's bills in connection with contract work. Contractor shall furnish IRHTP satisfactory evidence that all persons who have done work or furnished materials, equipment, or service of any type, under the contract have been fully paid prior to acceptance by IRHTP.
- 13.13. Contractors/subcontractors shall pay time and material charges of IRHTP personnel, when contractor has made a commitment to be on site by a certain time and is either late or no show.
- 13.14. Liquidated damages in the amount of **Two Hundred Dollars (\$200.00)** per consecutive calendar day will be assessed for each day that the work shall remain uncompleted after the end of the contract period with due allowance for extensions of the contract period due to conditions beyond the control of the Contractor/subcontractor.

14. SUBCONTRACTS

- 14.1. Contractor shall not assign, sub-let or transfer the whole or any part of work herein specified without written consent of IRHTP. Assignment, sub-letting or transfer shall not relieve the Contractor from its responsibilities set forth herein.
- 14.2. Detailed specifications are separated into titled parts for convenience or reference and to facilitate letting of contracts and subcontracts. Such arrangement shall not obligate IRHTP Project Coordinator to establish limits on contracts between Contractors and subcontractors.

15. CONTRACTOR'S/SUBCONTRACTOR'S EMPLOYEES

- 15.1. Contractor shall personally supervise subcontracted work or provide a capable superintendent satisfactory to IRHTP Project Coordinator. Superintendent shall be authorized to receive instructions from IRHTP Project Coordinator/representative.
- 15.2. Incompetent or Incorrigible employees shall be dismissed by the Contractor or its representative when requested by IRHTP Project Coordinator. Such dismissed persons shall not be permitted to return to work on contracted IRHTP project without written consent of IRHTP Project Coordinator.
- 15.3. Contractor shall give preference to local labor in execution of this contract, insofar as is practicable.
- 15.4. Contractor/subcontractor shall furnish the names, social security numbers, and addresses of all the employees on each job site by month, day, and year on a weekly basis.
- 15.5. Contractor/subcontractor shall have the name of their company clearly displayed on all their owned or leased vehicles and/or equipment.
- 15.6. Contractor/subcontractors shall have business cards with their respective companies name, phone, and fax numbers listed.
- 15.7. Contractor/subcontractor shall at all times be deemed to be representing and/or performing as an independent contractor and not as an agent or employee of IRHTP.

16. PERMITS, REGULATIONS, EASEMENTS

- 16.1. In execution of work specified herein, Contractor/subcontractors shall conform to regulations and ordinances of any governmental body that may apply in execution of specified work.
- 16.2. Contractor shall obtain such permits, licenses, and easements as may be required for construction of work unless otherwise indicated.

17. SAFETY



- 17.1. NO JOB IS SO URGENT THAT WE CANNOT TAKE TIME TO PERFORM OUR WORK SAFELY.
- 17.2. Safety is the foremost concern in any contract operation. UNSAFE ACTS OR OPERATIONS WILL NOT BE TOLERATED to the point of shutdown and termination of contractor.
- 17.3. Compliance with all Federal, State, and Local laws, ordinances, and regulations concerning health and safety as well as IRHTP standards is mandatory.
- 17.4. A weekly safety meeting involving the IRHTP field superintendent(s) will be held each Monday. The previous week and anticipated hazards will be discussed, with preventive measures outlined. For new types of activities, a hazard analysis form will be filled out and discussed with the contractor. Previous hazard analysis (as applicable to present work) will also be reviewed at this time. During the week the IRHTP representative will inspect the work sites. Any violations will immediately be brought to the attention of the contractor's supervision and corrected. Continued violations will be reason for termination of contractor. The IRHTP insists on having a quality, productive, and safe project.
- 17.5. Hard hats will be worn by all personnel in installation areas at all times. **No exceptions.**
- 17.6. During work in right-of-ways of interstate, secondary, and other roadways, and on all state projects, hard hats and reflective vests will be worn. **No exceptions.**
- 17.7. Traffic cones, flagmen, warning signs will be inspected each day at each work site.
- 17.8. Contractor will provide evidence that a written Confined Space Procedure, complying with the latest OSHA standards, will be adhered to. The contractor will provide a copy of their written procedure to IRHTP prior to any work that may involve entering a confined space.
- 17.9. All excavations left unattended or open shall be properly barricaded or plated (steel plate if in the street) until temporarily backfilled or complete restoration has been performed. During any non-working hours, contractor shall place steel plates over any open trenches that would pose a threat to vehicular traffic. The steel plates shall be of sufficient thickness to withstand the weight of a vehicle and anchored in place to prevent movement. Open trenches and holes, not exposed to vehicular traffic will be encircled by flexible orange snow fence and shall also be covered with plywood (or equal) and anchored in place. Plywood (or equal) shall be of sufficient thickness to withstand the weight of the anticipated traffic.

18. BARRICADES AND LIGHTS

- 18.1 Erect and maintain barricades and lights and/or provide watchmen in conformance with current Manual of Uniform Traffic Control Devices (MUTCD), for protection and warning of pedestrians and vehicles; all barricades, lights and/or watchmen at expense of Contractor.
- 18.2 IRHTP Project Coordinator/representative will not allow work to proceed until all signs, barricades and lights are in place; requirements for type of signs and number of signs will be strictly enforced; improper signage during construction will constitute "improper work" and IRHTP Project Coordinator will cause Contractor to suspend work.
- 18.3 All signs, barricades, and other traffic control devices used on the project shall be furnished, installed and maintained by Contractor; all traffic control devices shall be maintained in a state of good repair and shall be cleaned and washed periodically as needed.

19. THE IRHTP PROJECT COORDINATOR OR REPRESENTATIVE

- 19.1 IRHTP Project Coordinator or Representative shall make general observations of work as an agent of IRHTP. IRHTP Project Coordinator or Representative's general observation shall not be construed that it shall direct or control operations of Contractor/subcontractor.

20. LINE AND GRADE

- 20.1. Contractor shall provide benchmarks, base lines and other reference points. Contractor shall provide competent men and tools, stakes and other materials as required establishing temporary or permanent reference marks in connection with the work. Contractor shall perform such detailed measurements as required to properly lay out and construct work.

21. TESTING CABLE



- 21.1. The Contractor/Subcontractor shall be responsible for on reel verification of cable quality prior to placement.
- 21.2. One hundred percent (100%) of the cable's fiber count shall be tested at 1310 nm with an OTDR or approved acceptance sheet by manufactory or proof of testing by others. Test results will be recorded on a form supplied by IRHTP. Completed test forms on each reel shall be handed over to the IRHTP Project Coordinator.
- 21.3. Subcontractor assumes responsibility for the cable after testing. This responsibility covers all fibers in the cable.
- 21.4. The Subcontractor shall supply all tools, test equipment, consumables and incidentals necessary to perform quality testing.
- 21.5. The cable ends shall be sealed upon completion of testing.

22. DECISIONS BY IRHTP PROJECT COORDINATOR

- 22.1. IRHTP Project Coordinator shall make decisions, in writing, on claims between Contractor and IRHTP within a reasonable time after presentation. Such decisions shall be regarded as final except for appropriate legal recourse.

23. ON-SITE REVIEW OR OBSERVATION

- 23.1. All materials used and all work done by Contractor shall be subject at all times to review, observation, test and approval by IRHTP Project Coordinator/representative. Contractor shall furnish samples of materials for observation and test as requested by IRHTP Project Coordinator. Contractor shall furnish any information required concerning nature or source of any proposed materials or equipment.
- 23.2. Construction, fabrication and manufacture of equipment or materials specified herein may be observed by IRHTP Project Coordinator at plant or factory.
- 23.3. Materials, equipment or work that does not satisfactorily meet specifications may be condemned by IRHTP Project Coordinator by written notice to Contractor. Condemned materials, equipment or work shall be promptly removed and replaced.
- 23.4. Defective materials, equipment or work may be rejected by IRHTP Project Coordinator at any time prior to final acceptance by IRHTP even though said defective items may have been previously overlooked.

24. IRHTP PROJECT COORDINATOR AND/OR ENGINEER TECHNICIANS

- 24.1. OSP Engineers and/or engineer technicians may be appointed by IRHTP Project Coordinator or IRHTP to insure that work is performed in accordance with plans and specifications.
- 24.2. IRHTP Project Coordinator and/or engineer technicians shall have authority to notify Contractor in writing of work that is not being properly performed. Contractor shall be liable for any work determined by IRHTP Project Coordinator as not being properly performed.
- 24.3. IRHTP Project Coordinator and/or engineer technicians shall have authority to permit deviation from plans and specifications.

25. TIME

- 25.1. Contractor shall commence work within time specified and shall complete work within time specified in contract.
- 25.2. Contractor shall work normal working hours defined as ½ hour after sunrise and ½ hour before sunset unless it is an emergency situation or change has been approved by IRHTP Project Coordinator.

26. DELAYS

- 26.1. Delays caused by injunction or legal actions, damages by elements, or other causes beyond control of Contractor (of which IRHTP shall be sole judge) shall entitle Contractor to a reasonable extension of time within which to complete work.
- 26.2. Application for extension of time shall be made to IRHTP by Contractor and shall state reasons for request for extension of time.

- 26.3. No extension of time shall be valid unless made in writing by IRHTP.
- 26.4. Normal weather conditions shall not form the basis of request for extension of time.
- 26.5. Abnormal weather conditions shall form basis of request for extension of time only to the delay in excess of that resulting from normal weather conditions.

27. OWNERSHIP OF MATERIALS

- 27.1. All materials and work covered by partial payments shall become sole property of IRHTP, but this provision shall not be construed as relieving Contractor from sole responsibility for all materials and work for which payments have been made, for restoration of damaged work, or as a waiver of rights of IRHTP to require fulfillment of all terms of contract.

28. OTHER CONTRACTS

- 28.1. IRHTP reserves right to let other contracts in connection with this work. Contractor shall afford other contractors reasonable opportunity for introduction and storage of their materials and execution of their work, and shall properly connect and coordinate its work with theirs.
- 28.2. When proper execution of Contractor's work depends upon work of another contractor, it shall inspect other work and report any defects in writing to IRHTP Project Coordinator. Contractor's failure to inspect and report shall constitute an acceptance of other contractor's work except for defects that may develop after completion.
- 28.3. To insure proper execution of its subsequent work, Contractor shall measure work already in place and shall at once report in writing to the IRHTP Project Coordinator any discrepancy between the executed work and drawings.

29. IRHTP RIGHT TO DO WORK

- 29.1. If Contractor neglects to prosecute work properly or fails to perform any provision of this contract, IRHTP, after three (3) days' written notice to Contractor, may, without prejudice to any other remedy it may have, make good such deficiencies and may deduct the cost thereof from the payment then or thereafter due the Contractor, provided, however, that IRHTP Project Coordinator shall approve both such action and amount charged to Contractor.

30. IRHTP'S RIGHT TO TERMINATE CONTRACT

- 30.1. IRHTP, upon certification of IRHTP Project Coordinator that there is sufficient cause to justify termination of contract, may, without prejudice to any other right or remedy, and after giving Contractor seven (7) days' notice may terminate employment of Contractor for any of following reasons:
 - 30.1.1. Contractor makes a general assignment for benefit of its creditors, or is adjudged bankrupt.
 - 30.1.2. Receiver is appointed on account of Contractor's insolvency.
 - 30.1.3. Contractor persistently or repeatedly fails or refuses, except when extension of time to complete is granted, to provide enough skilled people or proper materials.
 - 30.1.4. Contractor fails to make prompt payment to subcontractors/suppliers for materials or labor.
 - 30.1.5. Contractor persistently disregards laws and ordinances or instructions of IRHTP Project Coordinator.
 - 30.1.6. Contractor violates a provision of contract.
- 30.2. If IRHTP terminates employment of Contractor, it shall take possession of premises and all materials, tools and appliances thereon. It shall finish work by whatever method it may deem expedient. In such case Contractor shall not be entitled to receive any further payment until work is finished.
- 30.3. If unpaid balance of contract price exceeds expense of finishing the work including compensation for additional managerial and administrative services, excess shall be paid to Contractor. If

expense exceeds unpaid balance, Contractor shall pay difference to IRHTP. Expense incurred by IRHTP as herein provided, and damage incurred through Contractor's default, shall be certified by IRHTP Project Coordinator.

31. CONTRACTOR'S RIGHT TO STOP WORK OR TERMINATE CONTRACT

- 31.1. If IRHTP Project Coordinator fails to Issue any certificate for payment within fifteen (15) days after it is due, or if IRHTP fails to pay to Contractor with thirty (30) days of its maturity and presentation, any sum certified by IRHTP Project Coordinator, then Contractor may, upon seven (7) days simultaneous written notice to IRHTP and IRHTP Project Coordinator, stop work or terminate this contract. If Contractor elects to terminate this contract by written notice it shall recover from IRHTP payment for all work executed to date of notice and any loss sustained upon any plant or materials plus a reasonable profit.

32. PAYMENTS WITHHELD

- 32.1. IRHTP Project Coordinator may withhold or nullify the whole or a portion of payment certificate, based on subsequently discovered evidence, to such extent as may be necessary to protect IRHTP from loss on account of:
- 32.1.1. Defective work not remedied.
 - 32.1.2. Claims filed or reasonable evidence indicating probable filing of claims.
 - 32.1.3. Failure of Contractor to make payments properly to subcontractors/suppliers or for materials or labor.
 - 32.1.4. A reasonable doubt that contract can be completed for balance then unpaid.
 - 32.1.5. Damage to another contractor.
 - 32.1.6. Claims of IRHTP for liquidated damages.
 - 32.1.7. Payments shall be made for amounts withheld when above grounds are removed.

33. FINAL REVIEW, ACCEPTANCE AND FINAL PAYMENT

- 33.1. When work has been satisfactorily completed, IRHTP Project Coordinator will certify Contractor's final estimate stating that work has been completed in accordance with terms and conditions thereof with qualifications, if any, as stated. Balance found to be due Contractor according to the terms of payment shall be paid by IRHTP as specified in contract, provided, however, that **any state laws which designate manner of final payment shall be followed in lieu of manner of final payment outlined above.** Prior to receipt of final payment, Contractor shall file with IRHTP a receipt in full from each manufacturer, subcontractor, and dealer for all equipment and materials used on the work and a complete release of all liens, including tax liens, which may have arisen from this contract and required statements from Contractor and all subcontractors of sales and use tax paid. In lieu thereof, IRHTP, at its option, may accept from Contractor a statement showing balance due on all accounts.
- 33.2. Notify Engineer when project is considered to be complete and ready for final review.
- 33.3. IRHTP will not make more than 2 trips to any one site for inspections. If site requires more than 2 trips, Contractor will pay time, material & vehicles charges for additional inspections. This paragraph inclusive of item 13.13 in RESPONSIBILITY OF CONTRACTOR.
- 33.4. When Engineer has certified that he has reviewed the work of Contractor and stated that it is complete and in substantial conformance with the plans and specifications.
- 33.5. When Contractor has submitted to IRHTP and Engineer documents called for in Chapter 3, Annex C, Link Segment OSP Completion Check List.

34. SUSPENSION OF WORK

- 34.1. IRHTP may suspend work, or any part thereof, at any time, by giving ten (10) days' written notice to Contractor. The work shall be resumed by Contractor within ten (10) days after date fixed in written notice from IRHTP to Contractor to do so.
- 34.2. If work, or any part thereof, shall be suspended and if IRHTP does not give written notice to Contractor to resume work within one (1) year of date of suspension, Contractor may abandon

suspended portion of work. Contractor will be entitled to estimates and payments for all work done on the portions so abandoned, if any.

35. CLEANING UP

- 35.1. Contractor shall keep premises free from accumulations of waste material or rubbish caused by its employees or work. After completion of work it shall remove all its rubbish and all its tools, scaffolding and surplus materials from work site. It shall leave its work “broom clean” or its equivalent, unless more exactly specified. In case of dispute the IRHTP may remove rubbish and charge cost to Contractor as IRHTP Project Coordinator shall determine to be just.

36. DEFINITION OF TERMS

- 38.1 **AREA** The Numerical designation given to Merged Area HCP Districts and selected numbers given to other Part I End Points.
- 38.2 **BER** Bit Error Rate is a quality measurement for digital transmissions.
- 38.3 **CAPACITY** The sizing of the transmission links in terms of digital data rate requirements and refers to the traffic-handling capacity.
- 38.4 **CUTOVER OR ACCEPTANCE OF SERVICE** The date on which a specific element of the network has been accepted by the IRHTP and placed into service and the lease commences.
- 38.5 **dB** The abbreviation for decibel used to define relative signal strength.
- 38.6 **ELEMENT** A specific connection including all electronics, equipment and facilities required to provide Gigabit service.
- 38.7 **FACILITIES** Transmission lines or circuits available to provide service.
- 38.8 **FAR END** Refers to the network end point connected to an IRHTP access point.
- 38.9 **FCPC** Type of optical fiber connector with low connection loss and high reflection loss characteristics.
- 38.10 **F.O.T.** Fiber Optic Termination equipment
- 38.11 **IRHTP** Iowa Rural Hospital Telecommunications Program
- 38.12 **INTERPRETATION** Words used in the present tense shall include the future, the future tense shall include the present, the plural shall include the singular, and the masculine shall include the feminine.
- 38.13 **LINK-SEGMENT** A link-segment is a fiber optic facility that extends from a predetermined point to another predetermined point. For example, the fiber that extends from the “A” Location (the HCP) to the appropriate end point (Z) location. The link-segment includes the appropriate electronics necessary to make it operational.
- 38.14 **MEDIA** Channels of communications, i.e., digital signal transport facilities.
- 38.15 **MERGED AREA** (refers to locations-educational institutions) Each Iowa County is assigned to a geographic cluster of counties and each geographic cluster of counties is identified as a separate merged area. However, individual counties may be divided between or among more than one merged area.
- 38.16 **MTBR** A statistical method for estimating failures of electronic equipment (Mean Time Between Failure)
- 38.17 **MTTR** A statistical method for estimating electronics and facilities repair time (Mean Time to Repair)
- 38.18 **NEAR END** Refers to the IRHTP access point used to connect an individual network element.
- 38.19 **nm** Abbreviation for nanometers, a measure applied to the wavelength of light transmitted over an optical fiber.
- 38.20 **ORDERWIRE** A voice circuit with equipment connecting a far (remote) end point and the near end point for maintenance activities.
- 38.21 **PART I** All Part I Elements for the entire IRHTP.
- 38.22 **PART I END POINT** A State provided facility at which Part I link and Part II links are terminated. Regional switching functions are provided. Serves as the Point of Presence for the county in which it is located.
- 38.23 **PART II END POINT** A State provided facility at which Part I and Part II links are terminated. Switching (secondary) is provided. Serves as the Point of Presence for the county in which it is located.

- 38.24 **PART III END POINT** The communications connection between secondary switching centers and individual accredited nonpublic schools, public schools and city, regional, HCP's and county libraries.
- 38.25 **POP** Point of Presence is the IRHTP part I or Part II in a specific municipality that may be used as an IRHTP access point for interconnecting network elements.
- 38.26 **REGIONAL SWITCHING CENTERS** The Part I end points providing interconnectivity for Part II end points and future Part II and Part III and other IRHTP end points.
- 38.27 **RESPONSE** Refers to the time expended from receipt of trouble, through the testing process and dispatch of the repair technician if required.
- 38.28 **RFP Request** for Proposal.
- 38.29 **SHALL Is** always mandatory.
- 38.30 **SINGLE MODE** Single mode designates an optic fiber which passes only the fundamental or lowest order mode at the light wavelength of interest (namely, 1310nm and 1550 nm for this RFP)
- 38.31 **SITE Connection** within or adjacent to a new IRHTP end point.
- 38.32 **SONET** Synchronous Optical Network is an American and international transport system utilizing the STS - 1 (Synchronous Transport Signal, level 1) as a root base.
- 38.33 **SONET LIGHTWAVE SYSTEM** A digital (SONET based) network element consisting of OC-(n) fiber optic transmission equipment, fiber facilities, batteries, rectifiers, alarm system, and capable of being independently switched and utilizes the overhead for control.

PART 2 - SPECIAL CONSTRUCTION

1. GENERAL

- 1.1. Procedures outlined below are not intended to fully cover all special procedures or emergencies which may arise during construction but are offered as an aid to Contractor in planning work; Contractor will cooperate with City, Hospitals, Schools, and Engineer to minimize inconvenience, construction delays and interruptions to continuous operation of existing fiber facilities.
- 1.2. Determine location of all underground utilities before starting excavation work; locations of underground appurtenances are approximate and not guaranteed by IRHTP. (Reference 13.6, Responsibility of Contractor in PART 1 OF DETAILED SPECS)
- 1.3. Remove and replace all signs and other appurtenances that interfere with construction operations; replace damaged signs at no cost to IRHTP.
- 1.4. Limit construction operations to all provided property, rights-of-way and easements. Provide barricades, lights, signs and detours as necessary to reroute traffic around construction areas. **(Inclusive of 17.0, Safety & 3.0, Right of Way in PART 1 OF DETAILED SPECIFICATIONS.)**
- 1.5. Arrange with operating utilities for relocation or temporary removal of utilities in conflict with construction and for service needed during construction at no cost to IRHTP.
- 1.6. Dispose of materials removed during construction at locations as approved by Engineer.
 - 1.6.1. Dispose of waste products containing prescribed materials at approved landfill.
 - 1.6.2. Dispose of surfacing, broken concrete or rubble, excess excavated materials and spoil.
 - 1.6.3. Place excess excavated material at locations designated by Engineer.
- 1.7. Notify businesses and residents two days in advance, when construction will disrupt or block access to property.
- 1.8. Provide snow fence along boundaries of construction area as specified hereinafter and as directed by IRHTP Project Coordinator.
 - 1.8.1. Install snow fence when area is prepared for excavation; install on steel posts with maximum spacing of 8'; maintain until work is complete.
 - 1.8.2. Provide snow fence around all open trenches or open structures when left unattended.
 - 1.8.3. Provide snow fence to keep livestock away from construction activities.
- 1.9. Backfill trench as construction progresses.
- 1.10. Cleanup and provide surface restoration as work progresses.
- 1.11. Submit complete detailed construction procedure schedule after award of contract for planning, scheduling and controlling construction of project.
- 1.12. Contractor will be expected to provide adequate personnel and equipment to perform work within specified time of construction.
- 1.13. Extensions of contract period will be given consideration upon written request of Contractor; request must include valid supporting data and bona fide reasons for requesting extension; IRHTP expects work to be complete and ready for final acceptance within completion time specified.
- 1.14. Protect survey markers of lot corners.

2. COOPERATION WITH OTHERS

- 2.1. Advise all utilities prior to excavating in area where construction might affect underground gas, electrical, telephone, cable or water service.
- 2.2. Advise telephone company of proposed construction schedule as it relates to telephone service.
- 2.3. Advise power company of proposed construction schedule as it relates to electrical power.
- 2.4. Advise gas company of proposed construction schedule as it relates to gas service.
- 2.5. Advise water company of proposed construction schedule as it relates to water service.
- 2.6. Advise cable television company of proposed construction schedule as it relates to cable television.

3. CONTINUITY OF EXISTING UTILITY SYSTEMS

- 3.1. Prepare detailed construction procedure schedule after award of contract: show definite and positive action to be taken to minimize disruption to utility systems.
- 3.2. Meet with all utilities to determine operability of isolation to determine area for which service would be shut off for each utility.



4. SURVEY MARKERS

- 4.1. Contractor responsible for hiring registered land surveyor to inventory existing pipe, pins and registered survey lot corners disturbed by construction; land surveyor responsible for setting reference markers required to re-establish location of existing pipe, pins and registered survey lot corners; land surveyor will not be required to certify pins or pipe replace as being lot corners; replace all markers disturbed by construction including where more than one pipe, pin or other marker are present at a location, replace all markers in same location as removed; provide drawing to IRHTP showing locations where markers were found and reset; dimensional data not required on drawing; each pipe, pin or marker replaced must be the identical marker removed at that location

5. CONTAMINATED SOIL FINDS

- 5.1. If during course of construction evidence of deposits of contaminated soils are found, cease operations affecting find and notify IRHTP who will notify Iowa Department of Natural Resources; no further disturbance of deposits will ensue until notification by IRHTP that work may proceed; IRHTP will issue notice to proceed only after contaminated soils have been identified and procedures for remedial action have been determined and approved by Iowa Department of Natural Resources and IRHTP; compensation to Contractor, if any, for lost time or changes in construction due to changed conditions will be in accordance with change order provisions of specifications.

6. PAYMENT

- 6.1. No separate payment will be made for work covered under this part of the specifications. Include all costs in appropriate unit prices.

PART 3 - EXCAVATION AND BACKFILL

1. GENERAL

- 1.1. Excavation for trenches as specified herein; provide pipe/fiber as specified and shown on Standard Drawings for pipe/fiber installation.
- 1.2. Protect existing pavement from damage during construction if not shown on plans for removal; if damage occurs, replace in kind at no cost to IRHTP.
- 1.3. Remove, replace and repair items such as fences, storm drains, signs, hanging wires and other obstructions to accommodate construction equipment or to facilitate excavation; cost to remove and replace is incidental to construction.
- 1.4. Haul away and stockpile excavated material suitable for backfill; haul remainder of excavated material to an authorized waste site.
- 1.5. Remove soil not suitable for backfill; waste at disposal area specified in PART 2, SPECIAL CONSTRUCTION, Section 1.6 & 5.0; removal is incidental to construction, include cost in unit prices.
- 1.6. Where new work crosses existing utilities or utility services, excavate in advance of construction; determine crossing arrangement including exact construction line and grade. As specified in PART 1 - GENERAL REQUIREMENTS, Section 13.4 - 13.6, Responsibilities of Contractor.
- 1.7. Bore or jack under existing streets, utilities and structures except as noted on plans or as modified by IRHTP Project Coordinator.

2. DEFINITIONS

- 2.1. Earth: all materials including clay, silt, sand, gravel, hardpan, rock, shale, debris, junk, and brick, which can be removed by use of suitable excavating equipment and pneumatic tools.

3. EXCAVATION FOR STRUCTURES

- 3.1. Includes excavation for manholes and other appurtenances.
- 3.2. Excavate as required to firm, undisturbed soil for laying conduit. In the case of hand holes/manholes excavate six (6") inches below bottom of structure and fill with six (6") inches of ¾" river rock at no expense to IRHTP.
- 3.3. Provide sheeting, shoring, and bracing where required to hold walls of excavation or to protect existing structures or utilities.
- 3.4. When unstable material is encountered which will not, in opinion of IRHTP Project Coordinator, provide suitable foundation, remove and replace with granular stabilizing material as directed by IRHTP Project Coordinator in writing, cost incidental to construction.

4. TRENCH EXCAVATION

- 4.1. Keep width of trench as narrow as possible and still provide adequate room for backfilling and jointing.
- 4.2. Keep sides of trench as nearly vertical as practicable; comply with federal and state safety regulations.
- 4.3. Maximum desirable width of trench at top of fiber; as shown on Standard Drawings.
- 4.4. Excavate by hand:
 - 4.4.1. Under and around utilities.
 - 4.4.2. Where overhead clearance prevents use of machine.
 - 4.4.3. To protect trees and shrubs where shown on plans.
- 4.5. Remove top 18" of topsoil and store in segregated stockpiles for backfill prior to trench excavation.
- 4.6. The trench shall be as straight as practical. The bottom of the trench shall be smooth and free from any sharp edges. The trench shall be kept clear of debris and loose rock. All changes in trench grade shall be gradual.
- 4.7. The length of open trench shall not exceed 100' feet at the end of each working day. Any open trench, bore pit, or pothole shall be fenced, covered or otherwise barricaded to protect the general public at all times. Exceptions are subject to approval by the IRHTP. Good judgment and care must be exercised to prevent persons from falling into the open trench, or other damages

5. ROCK SAWING

- 5.1. Solid rock is defined as a consolidated rock that cannot be plowed to specified depth. Frozen ground is not considered solid rock.
- 5.2. Where solid rock is encountered, the cable will be protected by steel, PVC conduit, high-density polyethylene conduit (HDPE) at the discretion of the IRHTP or its authorized representative.

6. ROCK EXCAVATION (NOT RECOMMENDED)

- 6.1. Use of explosives; submit detailed plans outlining all proposed blasting operations, locations, methods and use of mats and other safety measures.
 - 6.1.1. Obtain written approval from IRHTP and Engineer before using explosives.
 - 6.1.2. Provide Special Hazard Insurance covering liability for all blasting operations.
 - 6.1.3. Use thoroughly experienced demolition personnel.

7. RUBBLE EXCAVATION

- 7.1. Rubble, as specified and defined herein, may be encountered along route.
- 7.2. Removal: as specified for rock.
- 7.3. Use of explosives: as specified for removal of rock.

8. SHEETING, SHORING, AND BRACING

- 8.1. Minimum shoring requirement; equivalent construction procedure to use of “sand box” to provide 8’ vertical protection; provide stacked sand boxes as required to maintain construction within construction limits.
- 8.2. Construct sheeting, shoring and bracing to hold walls of excavation where shown on plans or at other locations, to provide safety for workmen, to protect existing utilities or structures or to permit construction in the dry, sheeting operations which in the opinion of IRHTP Project Coordinator cause excessive vibration will not be allowed.
- 8.3. Leave sheeting and shoring in place when removal, in the opinion of IRHTP Project Coordinator, might damage new facility, existing utilities or structures.
- 8.4. Sheeting, shoring and bracing is incidental to construction; include cost in appropriate unit cost.

9. DEWATERING

- 9.1. All work must be done in a dry environment; obtain IRHTP Project Coordinator’s approval on methods of dewatering.
- 9.2. Provide for handling of water encountered during construction.
- 9.3. Lay no pipe/fiber in or pour no concrete on excessively wet soil.
- 9.4. Prevent surface water from flowing into excavation; remove water as it accumulates.
- 9.5. Divert stream flow away from areas of construction.
- 9.6. Do not pump water onto adjacent property without approval of IRHTP Project Coordinator.
- 9.7. Dewatering is incidental to construction; include cost in appropriate unit cost.

10. EXISTING UTILITIES

- 10.1. Hold a preconstruction meeting 3 days prior to beginning construction. Document meeting with a sign-in sheet detailing names, addresses, phone & fax numbers of company representatives present. Take minutes of meeting and hand documentation in with as built package.
- 10.2. Locations of utility lines, mains, cables and appurtenances are the responsibility of contractor; confirm locations of underground utilities by excavating ahead of work; Contractor fully responsible for damage to utilities during construction.
- 10.3. Protect services during construction.
 - 10.3.1. If utility services are in direct conflict with line and /or grade of new facility; notify IRHTP immediately; provide all necessary shut-down, repair, and relocation where conflicts occur; furnish labor, equipment, pipe and fittings; repair and relocation will be paid by contractor; when broken due to carelessness, repair is incidental to construction.

- 10.3.2. Support and protect, by timbers or other means, all utility pipes, conduits, poles, wire and other apparatus not to be moved; protective measures subject to approval of IRHTP Project Coordinator.
- 10.3.3. No utility or utility service will be moved to accommodate equipment employment; method of operation or for convenience of Contractor when utility or utility services does not conflict directly with line and grade of work.

11. TREE REMOVAL

- 11.1. Remove trees only in conflict with alignment of trenches or location of structures.
- 11.2. Removal includes grubbing and removing stump and roots, removal from site, disposal of debris and backfilling.
- 11.3. Tree and bush removal is incidental to construction; include cost in applicable unit price.

12. BACKFILL FOR STRUCTURES

- 12.1. Backfill after concrete, masonry, or glue has cured, and waterproofing, if specified, has been inspected and approved by Engineer.
- 12.2. Backfill with material removed from excavation; use no debris, frozen earth, large clods, stones or other unsuitable material.
- 12.3. Backfill simultaneously on all side of structure; save structure from damage at all times.
- 12.4. Terminate at original grade or at elevation shown on plans; dispose of excess excavation as directed by Engineer.
- 12.5. Prepare backfill for surface restoration as specified for adjacent trench.

13. TRENCH BACKFILL

- 13.1. Backfill trench immediately after contractor has recorded sequence marking on cable or location of connections and appurtenances or at IRHTP Project Coordinator's direction; backfill with select material excavated from trench.
- 13.2. Use no large stones, large clods, organic matter, rubbish, frozen or unsuitable materials in backfill; furnish extra soil from site to complete backfilling at no extra cost to IRHTP; remove and dispose of unsuitable material; backfill simultaneously on both sides of pipe to prevent displacement.
- 13.3. Hand place and carefully compact backfill to 1' over top of facility.
- 13.4. Backfill 1' over top of facility in layers not to exceed 18"; where compacted backfill shown on plans, compact to minimum 95% maximum density.
- 13.5. Backfill above PVC pipes:
 - 13.5.1. Backfill with pipe bedding material to minimum 6" above top of pipe; do not drop pipe bedding material from equipment bucket more than 2' above pipe; all pipe bedding material including backfill material is incidental to construction.
 - 13.5.2. Above pipe bedding material, backfill with excavated material, except frozen material, shale, and other non-suitable material; do not drop backfill material from equipment bucket more than 2' above bottom of trench until backfill material is in place 18" above bedding backfill material.
 - 13.5.3. Consolidate bottom 6" of trench backfill with hand tools and tampers; do not use vibratory plate compactor until above bottom 18" of trench backfill.
 - 13.5.4. Cable marking ribbon shall be installed above all trenched direct-buried HDPE/conduits. The ribbon shall generally be placed at a depth of 12" inches below grade and directly above the fiber/HDPE/conduits.
 - 13.5.5. Splice boxes/hand holes will be placed at all splice locations. Hand holes will be placed at intervals of approximately 1000' feet, change of direction, greater than 15% and as shown on construction drawings and typical drawings. Hand holes may be moved to locations more practical when necessary upon approval by the IRHTP.

14 SURFACE RESTORATION

- 14.1. All trenches: replace 18" of topsoil removed during excavation.
- 14.2. Grade tops of trenches to smooth, uniform lines without large lumps, clods or debris.
- 14.3. Dispose of all brush and rubbish as directed by IRHTP Project Coordinator.

- 14.4. Sod/seed all areas disturbed by construction unless otherwise shown on plans or as directed by IRHTP Project Coordinator.
- 14.5. Prepare site for seeding by disking, harrowing and had raking or other means following site grading; work soil to depth of 3”.
- 14.6. Precede seeding with uniform application of commercial grade fertilizer at rate per acre of 20 lbs. of nitrogen, 40 lbs. of phosphorous and 20 lbs. of potassium (400 lbs. of fertilizer grade 5-10-5 per acre, or approved equal); cultivate area 3” deep and work with harrow within 24 hours before seeding; smooth surface to eliminate clods and lumps before seeding.
- 14.7. Seeding in street parkings, lawns and developed areas (Type 1):
 - 14.7.1. Seed at rate of 85 lbs. per acre with following mixture proportioned by weight.

SEEDING	PERCENT
Kentucky Bluegrass	35%
Annual Rye	25%
Perennial Rye	20%
Creeping Red Fescue	10%
Chewing Fescue	10%

- 14.8 Seeding in City rights-of-way, railroad rights-of-way, pastures, farm fields and creek banks (Type 2):
- 14.9 Seed at rate of 1.25 lbs. per 1000 SF with the following mixture proportioned by weight:

SEEDING	PERCENT
Brome grass	60%
Alfalfa	20%
Red Clover	12%
Alsike Clover	8%

- 14.10 Add rye to seed mixture at rate of 1 bushel per acre if seeded between August 15 and October 15; add oats at rate of 1-1/2 bushels per acre if seeded between April 1 and May 30.
- 14.11 Inoculate alfalfa and clover seed not more than 8 hours before sowing.
- 14.12 Seed between dates of August 15 and October 15 or between dates of April 1 and May 30.
- 14.13 Cover seed by rolling with cultipacker, or by dragging or hand raking.
- 14.14 Mulch all seeded areas: mulch: dry oat straw at rate of 4000 lbs. per acre; stabilize mulch with tiller designed to anchor mulch to soil.
- 14.15 Water seeded area sufficiently to saturate seed bed; continue watering all areas until growth is established.
- 14.16 Contractor is responsible for turning over to IRHTP full stand of grass; replant or redevelop bare spots or areas not attaining full stand of grass during first growing season.
- 14.17 No separate payment will be made for work covered in this part of the specifications. Contract unit prices shall include all cost for restoral.

15. STREET & DRIVEWAY REPLACEMENT

- 15.1 Replace surface with new surfaces to match construction for type, size and surface texture unless otherwise specified.
- 15.2 Gravel or crushed stone:
 - 15.2.1 Place 6” compacted crushed stone in top of trench; conform to IDOT Class A crushed stone; place and compact in two lifts.
 - 15.2.2 Place additional compacted crushed stone beyond trench limits to widths shown on plans to restore to existing conditions; minimum thickness: 2”.
 - 15.2.3 No separate payment will be made for work covered in this part of the specifications.

16. FIELD DRAIN LINES



- 16.1 Field drain lines may be encountered along route of new sewer; notify IRHTP Project Management if drain conflicts with facility construction.
- 16.2 Where new facility crosses under field drain lines, replace with a length of Schedule 40 PVC pipe; match size of existing drain line; cut 1/8" to 1/4" wide slots at 12" centers transverse to pipe for slots on bottom; replacement paid for by contractor.
- 16.3 Where new facility parallels field drain lines, replace damaged field drain lines; match size and material of existing drain line.
- 16.4 No separate payment will be made for work covered in this part of the specifications.

17. FENCE REMOVAL AND REPLACEMENT

- 17.1 Remove fence for construction access as required within easements.
- 17.2 Miscellaneous fence removal and replacement is incidental to construction; restore fence to original or better condition; replace wooden fence posts with new posts unless directed otherwise by Engineer.
- 17.3 No separate payment will be made for work covered in this part of the specifications.

18. DIRECTIONAL BORING

- 18.1 This includes all labor, equipment, and materials to install a minimum of one 1-1/4 inch diameter HDPE using directional boring techniques. The running line of the duct shall be kept straight and level unless otherwise specified in the final construction drawings. Any changes, either vertical or horizontal, shall be gradual and not to exceed 1.5' deviation in less than 6" (inches). Special care shall be taken to insure that the duct connection between bores be kept straight and level. When installing inner-ducts, conduits shall be color coded or marked to aid in identifying the respective ducts. This color-coding shall be observed during connection to assure duct continuity.
- 18.2 This unit also includes any pothole excavation for whatever purpose along with the pothole restoration. The barricading and safeguarding of pothole excavations shall comply with **BACKFILL & EXCAVATION** section. Backfill and restoration of excavation shall comply with Federal, State or local governing agency requirements.
- 18.3 Entrance of HDPE conduits into manholes and hand holes/splice boxes shall be in a level and straight line to facilitate installation of fiber optic cable.
- 18.4 Every effort shall be made to maintain a minimum of twelve (12") inches of clearance between IRHTP conduit and other utilities.
- 18.5 The boring machine shall be grounded at all times during operation. The grounding method shall comply with the manufacturer's guidelines and requirements. Adequate barricades shall be erected to limit access to boring machine operation personnel only.

19. PAYMENT

- 19.1 No separate payment will be made for work covered in this part of the specifications. Include all costs in appropriate unit prices.

PART 4 - PIPES AND STRUCTURES

1. PIPE MATERIALS

- 1.1. Polyvinylchloride pipe (PVC):
- 1.2. Steel casing pipe: 0.25" under roadway; use for casing pipe where shown on plans.
- 1.3. HDPE
- 1.4. Plenum raceway

2. PIPE JOINTS

- 2.1. Polyvinylchloride (PVC) schedule 40: couplings and/or integral bell.
- 2.2. HDPE connectors: approved by the manufacture.
- 2.3. Steel pipe
- 2.4. Plenum connectors approved by the manufacture.

3. JOINT PROTECTION & INSPECTION

- 3.1. Carefully protect joints from injury while handling and storing pipe.
- 3.2. Use no deformed, gouged or otherwise impaired joints.
- 3.3. Clean bell and spigot surface of dirt and foreign matter before jointing pipe.
- 3.4. Use cleaner or primer.
- 3.5. Make joints in strict accordance with manufacturer's recommendations.

4. PIPE INSTALLATION

- 4.1. All inner-duct, HDPE or conduit shall be tagged or color-coded.
- 4.2. Before laying pipe, verify all measurements at site; make necessary field measurements to accurately determine pipe make-up lengths or closures.
- 4.3. Keep pipe free of all dirt and foreign material
- 4.4. Use no defective pipe; check each length for defects and hairline cracks at ends prior to lowering into trench.
- 4.5. Lower pipe carefully into trench.
- 4.6. Pull joints together with equipment recommended by pipe manufacturer; do not use backhoe or similar equipment to push joints together.

5. CONNECTIONS BETWEEN DISSIMILAR PIPE

- 5.1. Provide manufactured adaptor or coupling.

6. PIPE CONFLICTS

- 6.1. Where pipe parallels an existing facility maintain at least 1 foot of separation.
- 6.2. Where pipe crosses an existing facility maintain at least 1 foot of separation.
- 6.3. Provide all necessary shut-down, repair and relocation of existing facilities where conflicts occur; furnish labor, equipment, pipe and fittings; repair and relocation will be paid by contractor. When existing facility is damaged to carelessness repair is incidental to construction.
- 6.4. Conflicts as specified in EXCAVATION AND BACKFILL.

7. TRACER WIRE INSTALLATION

- 7.1. Tracer wire shall be placed with all HDPE conduit installed unless armored or traceable cable is used. The tracer wire shall be provided by the contractor. The contractor that installs the HDPE conduits shall install, splice, and test (for continuity) the tracer wire. If the tracer wire is not placed or is broken during installation, the contractor shall notify IRHTP Project Management immediately. The area of the route that does not have tracer wire installed shall be identified on the as built documents submitted by the contractor. IRHTP will have the tracer wire installed by the subcontractor that installs the fiber optic cable or by other means. If the tracer wire is installed by a

contractor other than the contractor that installs the HDPE conduits, the IRHTP will charge the HDPE installation contractor reflecting IRHTP cost to have the tracer wire installed.

- 7.2. On multi-duct installation install a 5/8" x 8' copper clad ground rod in the hand hole located on public r/w. Place a #12 insulated copper locate wire from the ground rod to the FOTS room or to the outside of the building directly below the pull box and terminated on one side of a Reliance 5533 insulated indoor/outdoor terminal block with copper connectors. Run a #12 copper wire from this terminal block to the master ground bar in the FOTS room or place a ground rod on the outside of the building. Locate block in an accessible location. This is for locate "purposes only". This is not for grounding purposes. Note on as-built where ground is placed and tag locate wire as "locate wire".

8. PROOFING THE DUCT

- 8.1. All inner-duct, conduit/multi-duct will be proofed upon completion to verify continuity and integrity of the duct by pulling a solid rubber mandrel or a mandrel of other solid material such as steel or aluminum. The mandrel shall be at least 6" long and 1" in diameter. An IRHTP representative must be present to witness all duct proofing operations, duct that is not proofed in the presence of an IRHTP representative shall not be considered complete. The preinstalled mule tape of polypropylene rope may be used for this purpose but the tape or rope must be reinstalled upon completion of proofing. The reinstalled tape or rope must be free of damage, equal to its original integrity and free of other defects that would render it unsuitable for cable pulling.

9. MULTIPLE DUCT INSTALLATION

- 9.1. This item includes all labor, equipment and certain materials required to install four (4) 1.25" I.D. HDPE conduits in controlled access roadways and other locations as provided by in the utility accommodation policy. The HDPE conduits will be of different colors and will be plowed in place in such a manner that the duct to contain the IRHTP cable will be on top. The duct containing the IRHTP cable will be pre-inserted with a .25" nylon rope. All ducts shall have continuity. Refer to Appendix 1.17 on Sleeves.
- 9.2. Hand holes will be installed every mile to facilitate pulling, preferably at highway mileposts. However, hand holes may be moved to locations more practical when necessary upon approval by the IRHTP. All ducts shall enter and exit the hand holes. Should mid-assist points become necessary when pulling the cable, the ducts shall be spliced together in a watertight condition. Upon completion of cable placement hand holes will be duct plugged and gopher proofed.

10. MANHOLES/HAND HOLES

- 10.1. Use non-shrink grout between pipe and manhole block out.

11. PAYMENT

- 11.1. No separate payment will be made for work covered under this part of the specifications. Include all costs in applicable unit prices for items to which work pertains.
- 11.2. Pipe in Place, LF:
 - 11.2.1. Unit price includes furnishing pipe, handling, laying pipe bedding if required, materials, trench excavation, dewatering, connections between dissimilar pipes, connections to existing system, connections of existing pipes and appurtenances, sheeting, shoring and bracing, backfilling, service connections, tree and brush removal, surface restoration including seeding, fencing, and miscellaneous associated work.
 - 11.2.2. Length will be measured along centerline of pipe with no deduction for manholes, including manholes.
- 11.3. Standard Manholes, Each Unit price includes furnishing, installing, excavating, concrete, frame and cover, connections of or to existing facilities, backfill and miscellaneous associated work for manholes 0 - 10' deep.
 - 11.3.1. Diameter of manhole as shown on plans as specified.
- 11.4. Hand holes, Each Unit price includes furnishing, installing, excavating, frame and cover, connections of or to existing facilities, backfill and miscellaneous associated work.

12. BEDDING REQUIREMENTS

- 12.1. Bedding for manholes/hand holes: lay manholes/hand holes on 6" deep bedding material (3/4" river rock); fill around perimeter of manholes/hand hole to minimum depth of 6" deep bedding material (3/4" river rock). Compact all bedding material by vibration.

13. PAYMENT

- 13.1. No separate payment will be made for work covered under this part of the specifications. Include all costs in applicable unit prices for items to which work pertains.

PART 5 - SPECIFICATIONS FOR BURIED INSTALLATION OF FIBER OPTIC CABLE

1. GENERAL

- 1.1. This specification covers the buried installation of a fiber optic cable by various methods for the IRHTP Network. Methods of direct burial are plowing, trenching or boring. Sections designated by the Contractor and crossings such as roads and streams shall be installed with external protection as specified herein. Installation of hand holes for use as pull boxes and splice boxes is covered herein, as is any work required at regenerator sites.
- 1.2. As required, the cable shall be removed from the reel by approved methods and pulled through the pipe crossings or under other utilities and replaced on the reel to continue the installation operation. The cable will be installed in various lengths up to 12 kilometers as determined by the Contractor.
- 1.3. Hand holes will be installed per the applicable Standard Drawing at intervals or locations called for in the specifications or drawings. Bends of small radii and twists that might damage cable shall be avoided. During the placing operation, cable shall not be bent in a radius less than 20 times the outside diameter of the cable.

2. MATERIAL

- 2.1. IRHTP Compatible/Specified Material: Contractor will furnish the materials listed below:

- 2.1.1 Armored Fiber Optic Cable meeting SMF-28/GR/253 fiber specifications
Single Jacket
Loose Tubes, Three tubes of 12 fibers each (Dri-Core)
36 total fibers
Color coded Buffer Tubes
- 2.1.2 Non-Armored Cable (Kevlar)
Kevlar Cable must be in duct and must include a #10 AWG tracer wire inside the duct.
- 2.1.3 All rack mounted bulkheads or FDP's shall be equipped with SC style connectors
- 2.1.4 Warning Tape
- 2.1.5 Hand Holes
- 2.1.6 S.I.P. Peds
- 2.1.7 Sign Post & Signs
- 2.1.8 Ground Rods & Clamps, Bare #6 Wire
- 2.1.9 PVC Pipe - Schedule 40
- 2.1.10 GIP
- 2.1.11 BIP
- 2.1.12 Cable Lubricant
- 2.1.13 Pulling Rope - 600 lb test

3. DEFINITION OF TERMS

- 3.1. Road Gravel. Material used for restoration of all gravel surfaces shall conform to IDOT spec. 4120, Class A road stone, Standard Specifications for Highways and Bridge Construction.
- 3.2. Erosion Control Fencing. Erosion control materials must conform to Section 4169 of the Standard Specifications for Highway and Bridge Construction.
- 3.3. Rip Rap. When riprap is needed it shall be Class "E". It shall conform to IDOT spec. 4130 Rip Rap Standard Specification for Highway and Bridge Construction.
- 3.4. Pea Gravel. Pea gravel used for bedding under manholes shall comply with IDOT Spec. 4131 Porous Backfill Standard Specifications for Highway and Bridge Construction.
- 3.5. Asphalt. Material used for asphalt restoration shall conform to IDOT Spec. 4126 of Standard Specifications for Highway and Bridge Construction.
- 3.6. Concrete. Concrete for sidewalk, curb and gutter replacement shall be class "C" 3000 lb. and shall conform to IDOT Spec. 2403 of Standard Specifications for Highway and Bridge Construction.

- 3.7. Cable Lubricant. Contractor shall supply a cable lubricant approved by the Contractor for installation of fiber optic cable.
- 3.8. Pulling Rope. Contractor shall supply pull rope with 600 LB proper tensile strength.
- 3.9. Bridge Attachments. Pipe for bridge attachments shall be hot-dipped galvanized rigid steel. Attachments to steel bridges will be accomplished by the use of approved galvanized beam clamps and hangers. Drilling steel bridge structures is not allowed. The attachment to concrete bridge structures will be accomplished by the use of expanding anchor bolts in drilled holes. The use of driven or explosive set anchors will not be permitted when not shown on plans. Exposed ducts shall be supported at intervals of 6' or less. Approved expansion joints will be installed at all bridge structure joints and in no case will exceed 100 LF intervals. Weep holes of 1/4" diameter will be drilled at 20' intervals, and 12" above ground level.
- 3.10. Duct Plug. Contractor shall supply a "JACKMOON PLUGS" blank plugs and Simplex to seal all conduit and casing openings.
- 3.11. Hardware Cloth. Contractor shall supply 2" x 2" mesh - 19-gauge wire for use over pea gravel and under manholes.

4. PROTECTION OF MATERIAL

- 4.1. Contractor shall be responsible at all times for protecting the exposed portions of the cable from damage, including intrusion of water. Cable ends will be left at splice locations with sufficient protection to prevent water from entering the cable ends. The contractor shall replace or repair at the IRHTP's option, and damage that occurs to the cable as a result of insufficient or improper protection of the cable.

5. REPORTING CABLE DAMAGE

- 5.1. The cable shall be carefully inspected by the IRHTP during the plowing or trenching operation prior to its installation in the project to be certain that it is free from defects. Cable damage due to the contractor negligence will be the responsibility of the contractor. Every instance of damaged cable observed at any time shall be immediately called to the attention of the Contractor; whether prior to installation, during construction, or during test or observation subsequent to installation. The method of repair or correction of such damage shall be in accordance with the written instructions of an authorized IRHTP's representative. The contractor shall make repairs or corrections promptly.

6. CABLE REPAIRS

- 6.1. Minor damage to the outer jacket of the cable observed prior to or occurring during construction shall be repaired in accordance with instructions from an authorized IRHTP's representative.
- 6.2. Cable damage in excess of minor damage to the outer jacket, which is observed prior to or during construction, shall be corrected as follows:
 - 6.2.1. The damaged section of cable shall be enclosed in (1) a buried housing located as specified by the IRHTP or in (2) a buried cable splice enclosure if approved by the IRHTP, buried to the same depth as that specified for the cable. If the shield has been broken or the conductor insulation damaged, the cable shall be restored to the equivalent of new condition. This may require cutting out the damaged section of cable if required by the IRHTP. It may also require the replacement of an entire section between two existing hand holes. Determination of the method of correction will be at the IRHTP's sole discretion.
- 6.3. Damage to cable discovered after burial, either through test or observation, shall be repaired as follows:
 - 6.3.1. The damaged section of the cable shall be repaired as approved by the IRHTP. This may require cutting out the damaged section and replacing it with a short section of new cable with splices made in (1) buried hand holes or (2) buried cable splice enclosures, if approved by the IRHTP, which are buried to the same depth as required for the cable. It may also require the replacement of an entire section between two splice points. Determination of the method of correction will be at the IRHTP's sole discretion.

7. DEPTH OF BURIAL (Refer to Appendix 1.18)

- 7.1. Except where otherwise specified, the cable shall be placed to a minimum depth of 36 inches unless otherwise approved by the IRHTP. Greater cable depth will be required at the following location.
- 7.2. Where cable route crosses roads, the cable shall be placed at a minimum depth of 48" below the pavement or 36" below the paralleling drainage ditch, whichever is greater; unless the controlling authority requires additional depth in which case the greatest depth will be maintained.
- 7.3. Where the cable route crosses railroad rights-of-way the cable shall be placed at a minimum depth of 60" below the railroad surface or 36" below the paralleling drainage ditch, whichever is greater; unless the controlling authority requires additional depth in which case the greatest depth will be maintained.
- 7.4. Where cable crosses existing sub-surface pipes, cables, or other structures. At foreign object crossings the cable will be placed to maintain a minimum of 12" clearance from the object or the minimum clearance required by the objects owner, whichever is greater.
- 7.5. Where cable crosses small gullies, ditches, and washes, the cable will be placed at a minimum depth of 48" below the flow line of the waterway unless IRHTP specifically waives this requirement. Such determination shall be made by the Contractor's field representative and recorded on the as-built drawings. In no case shall the cable be placed at less than the 36" minimum depth.
- 7.6. Where cable crosses large/major gullies, ditches, streams, rivers, washes or areas prone to flooding, the cable will be placed at a minimum depth of 10' below the flow line of the waterway unless IRHTP specifically waives this requirement. Such determination shall be made by the IRHTP field representative and recorded on the as-built drawings. In no case shall the cable be placed at less than the 36" minimum depth.
- 7.7. Additional cable depth required to satisfy the preceding items shall not be construed as Extra Work.
- 7.8. Where rock excavation is required, a minimum depth of the cable of 24 inches may be allowed, with IRHTP's written approval, when the cable has additional protection of Contractor-provided PVC or HDPE conduit. Otherwise, the minimum depth for placement in rock will be 36".
- 7.9. Where there is a layer of soil over rock, the minimum depth that the contractor may be allowed, shall be the shallower of: 1) the minimum depth of trench in rock, measured to the soil-rock interface; or 2) the minimum depth in soil, measured to the surface.
- 7.10. At other locations as may be specified by the IRHTP.

8. CABLE MARKING RIBBON

- 8.1. The cable marking ribbon shall be installed above all direct-buried cable and conduit. The ribbon shall generally be placed at a depth of 12 inches below grade and directly above the cable or conduit.

9. HAND HOLES (SPlice BOXES)

- 9.1. At all splice locations, hand holes will be placed as splice vaults. Hand holes may also be placed at the end of conduit runs to serve as pull boxes for the cable, at the option of the Contractor.
- 9.2. Hand holes will be set at all regeneration stations, at entrances to terminal stations, and at other locations required by the Contractor and/or shown on the drawings.
- 9.3. Hand holes shall be of the type shown on the applicable Standard Drawing. Hand holes shall be installed in accordance with the Standard Drawing.
- 9.4. Hand holes shall be spaced to allow sufficient length (75') of cable at each end of the reel to be coiled in the hand hole.
- 9.5. After placing the hand hole, contractor shall backfill to a level even with the top of the hand hole. The excavation shall be left in the above condition until after the splice has been completed by others. Upon notification by IRHTP that the hand hole is ready, the contractor shall complete the backfill of hand hole pit in accordance with the drawings and with Clause 22.0 of these Specifications.

10. CABLE PLOWING

10.1. General

- 10.1.1. The contractor shall be familiar with general guidelines covering the construction of buried communications cable.



- 10.1.2. The equipment and construction methods used by the contractor shall be such as to cause minimum displacement of the soil.
- 10.1.3. Damage to banks, ditches, driveways and roads caused by the equipment shall be immediately repaired to the satisfaction of the IRHTP and public authorities having jurisdiction over highway and road rights-of-way.
- 10.1.4. Where cable is buried near the edge of pavements, the contractor shall take particular care to avoid damaging the pavement. If such damage does occur, repairs shall be made immediately to meet the complete satisfaction of state or local authorities having jurisdiction over the pavement.

11. PLOWING EQUIPMENT REQUIREMENTS

- 11.1. The plowing equipment shall be subject to the approval of the Contractor and the public authorities having jurisdiction over highway and road rights-of-way.
- 11.2. Plowing shall be performed by a prime mover with hydrostatic type steering and a static plow.
- 11.3. The design of the plowshare shall be such that the buried cable passing through the plow will not bind and shall not be bent in a radius less than 20 times the outside diameter of the cable. The feed chute must be a removable gate for the purpose of inspection and to allow the cable to be removed from or inserted into the feed chute at any intermediate point between splice locations. The cable path inside the feed chute must have low friction surfaces and be free of burrs and sharp edges to prevent damage to the cable as it passes through. Any welds must be smoothed. Internal guide rollers shall not be used.
- 11.4. The equipment shall be capable of extending the plow in order to maintain the required minimum depths under all terrain conditions.
- 11.5. The reel carrier shall be of adequate size and be configured so that the reel sizes being used can be safely handled.

12. PLOWING REQUIREMENTS

- 12.1. The slot made in the soil by the cable plows shall be closed immediately by driving a vehicle track of sufficient weight over the plow slot, to thoroughly compact the plow slot or by other suitable means approved by the Contractor.
- 12.2. Start and finish pits and pits at points of intersection, as needed must be excavated in advance of plowing cable. Ends of casings and crossings of foreign utilities shall be exposed prior to start of cable plowing operations.
- 12.3. The contractor shall exercise particular care in the use of trenching equipment and shovels in joining trenches to the slots made by the plow to be certain that the cable is not damaged.
- 12.4. To avoid possible damage to buried cable from exposure to traffic, livestock and other hazards, trenching of laterals, trenching around culverts, construction of aerial inserts and similar operations shall be completed as soon as practicable behind the plowing operation, but never more than 48 hours behind the plowing operation unless additional protective measures, as approved by the contractor, are employed. Notwithstanding this provision, the contractor remains responsible for the cable throughout the placing and acceptance intervals.
- 12.5. Care is to be exercised during the plowing operation, to feed the cable into the ground through the plow loose and at no tension. Equipment and construction methods shall be such as to assure compliance with this requirement. The contractor shall furnish competent supervision at all times at the site of plowing operations to assure compliance with this requirement.
- 12.6. If during the plowing operation, the plow should strike a buried object or rock that stops the equipment and necessitates removal of the plow from the ground, the precautions detailed in Section 9.4 shall be observed to avoid damage to the cable. Should it be necessary to back the plow to remove it from the ground, the cable shall be uncovered by hand a sufficient distance back for inspection by the IRHTP to determine whether the cable has been damaged.
- 12.7. Where casing pipe or foreign utility is encountered, the cable shall be unrolled and placed in a figure 8 configuration. After the cable is pulled through the casing pipe(s) or under the foreign utility (ies), it shall be replaced on the reel and the plowing operation restarted. EXTREME CARE must be used whenever the cable is handled so that it will not be kinked or damaged in any manner.
- 12.8. The plowing precautions detailed in Section 9.4 shall be strictly observed.

13. PLOWING PRECAUTIONS



- 13.1. Failure to observe precautions concerning proper operation of the prime mover and plow contributes to unnecessary cable damages. The following precautions shall be reviewed with equipment operators and shall be strictly observed.
- 13.1.1. The tractor shall always be started slowly and speed increased gradually after all cable slack is removed from the cable delivery system.
 - 13.1.2. Plow attitude and depth shall be changed gradually. Such changes shall be made only while prime mover is moving.
 - 13.1.3. Should it be necessary to raise the plow share to the surface when the plow is not moving, the cable to the rear of the feed chute shall be excavated and slack pulled so that the cable is not kinked over the feed chute exit.
 - 13.1.4. Do not plow with the share set at extreme forward rake angles without a share specifically designed for this purpose.
 - 13.1.5. When rigging for off-set plowing, the cable shall be re-routed over the cable feed systems to conform with the new configuration.
 - 13.1.6. Abrupt changes in terrain along the cable path shall be graded off ahead of the plow. Such grading must be approved by IRHTP and IDOT.
 - 13.1.7. The plowing operation shall be observed continuously for obstructions, proper feeding of cable, maintaining proper depth, etc.
 - 13.1.8. Under no circumstances shall the plow be backed or the share moved to the rear with cable in the chute.
 - 13.1.9. At no time shall the plow be wobbled either vertically or horizontally to break through an obstruction.
 - 13.1.10. At no time shall the plow deviate from the normal route to seek an "on grade" crossing level for farm roads. Unless the road is bored, contractor shall level the plow train path in order to make a level crossing of the road. Subcontractor shall repair the road after passage, including repaving or gravelling, as required
 - 13.1.11. No practice will be allowed that will cause an abrupt change in direction of the plowed in cable.

14. CABLE PLOWING IN ROCK AREAS

- 14.1. Solid rock is defined as a consolidated rock that cannot be plowed to specified depth. Frozen ground is not considered as solid rock.
- 14.2. Where solid rock is encountered, the cable will be installed by the trench method described in Section 10.0, while also being protected by steel PVC conduit, high-density polyethylene conduit (HDPE), at the discretion of the Contractor.

15. PLACING CABLE AT REEL ENDS

- 15.1. The cable will be placed to provide sufficient cable for splicing at ground level. This should be a minimum of 75 feet. Inside the regenerator station buildings, sufficient cable will be allowed to connect to the equipment.

16. CABLE IN TRENCH

- 16.1. Excavation
 - 16.1.1. The trench shall be as straight as practicable. The bottom of the trench shall be smooth and free from any sharp edges. The trench shall be kept clear of debris and loose rock. All changes in trench grade shall be gradual.
 - 16.1.2. The length of open trench shall not exceed 100' at the end of each working day. Any open trench shall be fenced. Exceptions are subject to approval by the IRHTP. Good judgment and care must be exercised to prevent livestock or persons from falling into the open trench.
 - 16.1.3. Driveways, lanes, or roadways, which are open cut, shall be opened just prior to the conduit and/or cable placing. In no case shall the driveway, lane, or roadway be left impassable at the end of the day. The general public safety is paramount and appropriate steps shall be taken to ensure safety at all times.

16.2. Backfill

- 16.2.1. The trench shall be backfilled and compacted to the satisfaction of the IRHTP or local authorities, promptly behind the pipe and/or cable placing, except at splice locations. In general, the backfill shall consist of the earth removed from the trench.
- 16.2.2. Where a carrier, pipe, conduit, duct, or cable is placed by trenched construction beneath a roadway or a driveway or within five feet of the edge of an existing or proposed pavement or base course, the backfill within the roadway shall be placed and compacted in not more than 6" lifts, from the top of the installation to the ground line. The backfill shall be of suitable material free from boulders, frozen clods or roots or excessive sod or other vegetation. The fill shall be carefully hand tamped under and around the installation in lifts not to exceed 4" in loose thickness.
- 16.2.3. In areas inaccessible to tamping-type rollers where compaction is required, a mechanical tamper of a size suitable for the work involved shall be used.
- 16.2.4. Pneumatic tampers shall be operated at pressures no less than those recommended by the manufacturer.
- 16.2.5. Compaction of backfill shall be to the satisfaction of the IRHTP, and consistent with good highway construction methods.
- 16.2.6. On public right-of-way all backfilling must conform to the requirements of the authority having jurisdiction.

16.3. Trenched Road and Driveway

- 16.3.1. Generally all hard surfaced areas will be bored. The backfill at crossings of driveways, lanes, or roadways shall be the same as 10.2.
- 16.3.2. Pavement replacement shall match existing paving in type of pavement appearance, wear surface, and durability to the maximum extent practical. Replacement shall match existing structure and shall include curbing, walkways, or any other concrete structure damaged during construction. Pavement repair shall be subject to approval by the IRHTP and must conform to the requirements of the local governing authority having jurisdiction including required cutbacks, or "T" topping. Pavement repair not installed in accordance with the requirements of these Specifications shall be removed and replaced.

16.4. Trench In Rock

- 16.4.1. See Section 9.5 for a definition of solid rock.
- 16.4.2. Where solid rock is encountered, the trench may be excavated using a rock saw or other rock cutting equipment. The excavation, backfill and road crossings in solid rock areas shall conform to sections 10.1, 10.2 and 10.3 of these specifications unless specifically exempted in this section.

16.5. Placing Cable

- 16.5.1. The cable will be placed to provide sufficient cable for splicing at ground level. This should be a minimum of 75 feet. Inside the regenerator station buildings, sufficient cable will be allowed to connect to the equipment.

17. MULTIPLE DUCT INSTALLATION

- 17.1. This item includes all labor, equipment and certain materials required to install four (4) 1.25" I.D. HDPE conduits in controlled access roadways and other locations as provided by in the utility accommodation policy. The HDPE conduits will be of different colors and will be plowed in place in such a manner that the duct to contain the IRHTP cable will be on top. The duct that will contain the IRHTP cable will be pre-inserted with a .25" nylon rope. All ducts shall have continuity.
- 17.2. Hand holes will be installed every mile to facilitate pulling, preferably at highway mile posts. . However, when necessary and upon approval by the IRHTP, hand holes may be moved to locations more practical. The duct containing the IRHTP cable shall enter and exit hand holes and the empty

ducts shall pass around the hand hole on the field side rejoining the IRHTP duct as soon as practical without causing severe bending.

- 17.3. Should mid-assist points become necessary when pulling cable, the ducts shall be spliced together in a water-tight condition. Upon completion of cable placement hand holes will be duct plugged and gopher proofed.

18. CABLE PULLING

- 18.1. The optical fiber cable provides high capacity transmission channels. To ensure that the cable's qualities and characteristics are not degraded, excessive pulling tensions or excessively short bending radii should be avoided. The maximum pulling tension is 600 lbs. and the minimum bending radius is: dynamic (cable in movement) = 20 times outside diameter of the cable and static (cable in place) = 10 times outside diameter of the cable. These rules should be followed at all times when placing excess cable in hand holes for splicing and slack coils.
- 18.2. When pulling fiber, a break-away swivel, along with a Slip Clutch Capstan Winch that shows the dynamometer reading at all times shall be used.
- 18.3. Cable lubrication shall be used to reduce the pulling tension on longer segments of the cable placement operation. Contractor approved lubricants shall be used.
- 18.4. At each pulling hand hole a 35' coil of fiber will be left coiled in the bottom of the box. At each splice location 75' will be left on each cable end for splicing. Tags will be placed on fiber showing the direction of the cable. The cable ends will be sealed watertight to keep water from entering the cable.

19. SUBSURFACE OBSTRUCTIONS

- 19.1. Contractor is responsible to locate and avoid all subsurface obstructions. It is the contractor's responsibility to verify the locations of subsurface obstructions shown on the drawings as well as any additional obstructions not identified on the drawings. Contractor shall notify owners and operators of foreign pipelines or other utilities at least 48 hours prior to excavation near the utility. Contractor shall keep a log of all telephone contacts to notify foreign utilities of excavation. Such log shall include date, time of day, name of individual contacted, name of Company contacted, telephone number, and confirmation number.
- 19.2. When crossing buried pipes, cables, and other utility lines, the cable shall be placed under the foreign utility line with a minimum separation of 12 inches. However, if the foreign utility line is 55 inches or more deep, the cable may be placed over the utility at the normal placing depth unless the utility owner specifically requires placing of facilities below their lines. In this situation the new facilities will be placed a minimum of 12" below the existing line (see Section 6.0).

20. INSPECTION OF BURIED CABLE

- 20.1. The installed cable will be tested as a part of the cable splicing operation. Contractor shall be liable for the cost of any and all repairs or replacement necessary to correct any defect in the installed cable which can be attributed to actions by the contractor which are disallowed by these specifications, by the Cable manufacturer or by good industry practice, as determined by the IRHTP. The term "defect" as used in the preceding sentence shall mean any defect that the IRHTP determines to have an effect on current or future operations of the completed fiber optic communication system.

21. HIGHWAY, RAILROAD AND OTHER BORED CROSSINGS

- 21.1. All crossings of state or federal highways and railroads rights-of-way shall be made by boring and placing a pipe casing. The cable shall be placed through the pipe casing. Country roads and other roadways shall be bored, trenched or plowed, as directed by the IRHTP and approved by the appropriate local authority.
- 21.2. All work performed on public right-of-way or railroad right-of-way shall be done in accordance with requirements and regulations of the authority having jurisdiction there under.
- 21.3. At anytime the pipe casing bored under the roadway exits below the prescribed depth, a backhoe will be used to gradually return the bored ditch to plowed grade.
- 21.4. In no case shall the completed crossing be less than 48" deep at its shallowest point.

- 21.5. Certain roadways may be allowed to be crossed by trenching. In those cases, it shall be the contractor's option to split conduit and place it around the cable in lieu of placing whole conduit and pulling the cable through the conduit. Contractor shall split the casing and install it around the cable in a manner approved by the Contractor. Split conduit will be secured after cable placement in such a fashion as to prohibit collapsing to less than its un-split diameter. Split conduit shall be sealed or plugged to prevent entry of dirt, water and rodents.
- 21.6. In areas that the cable is being laid in conduit, the ends of the conduit shall be capped or plugged to prevent entry of dirt, water and rodents.
- 21.7. Under railroads rights-of-way, the bore shall extend from toe of fill to toe of fill.
- 21.8. In no case shall an encasement extend less than toe of slope to toe of slope except along freeway rights-of-way in which locations the encasement shall extend from right of way to right of way.

22. STREAM AND CANAL CROSSINGS

22.1. General

- 22.1.1. In general, the cable shall be placed by direct bury methods (plow or trench) with additional conduit protection when directed by the IRHTP, across small streams and washes. Stream or river crossings may be made on non-freeways, through conduit attached to a highway or railroad bridge. Where required by local authorities, irrigation canals will be bored in the same manner as a road crossing.

22.2. Buried Crossings

- 22.2.1. Lake, canal, stream and river crossings shall be installed and restored in accordance with the Standard Drawings and the applicable Construction Drawings, and in accordance with the requirements of the permit, if any, and in accordance with the requirements of respective Federal, State and Local agencies, including those agencies concerned with water pollution and the protection of sport fisheries. Cable shall be laid across lakes, canals, streams and rivers as nearly level as practicable. Extreme care shall be taken to prevent damage to the cable during these installations.
- 22.2.2. The cable is to be installed in accordance with Clause 6.0, Depth of Burial. The banks of stream crossings shall be graded as necessary to provide the required burial depth under the stream and to provide a proper pathway for the plow train or trencher to traverse the bank and make a smooth transition to the stream bottom. Transitions from normal depth to stream-crossing depth shall be made smoothly without sharp bends in the cable. All cuts in banks and diversion berms shall be re-graded to match existing facilities and re-compacted to not less than 90% of maximum cf density at plus or minus 5% of optimum moisture content as determined by ASTM D698.
- 22.2.3. The banks of all canals, streams and rivers shall be restored to their former condition and bank protection materials or bulkheads will be installed where required. The methods of restoration and erosion control shall be as required by the landowner or agency having jurisdiction and as approved by IRHTP. IRHTP reserves the option to change the erosion control method in the field. Banks will be reseeded and mulched with grass seed and mulching material as required by the local governing authority. Berms will be constructed, where practicable, to divert water away from the trench line and disturbed bank areas. Costs for restoration of banks and installation of bank protection material and bulkheads shall be included in the price for completing the work.
- 22.2.4. As nearly as possible, the beds of all lakes, canals, streams and rivers shall be restored to their former elevation and grade, and spoil, debris, piling, cofferdams, false work, excavation, construction materials and obstructions resulting from installation of the cable shall be removed from the crossing to prevent interference with normal water flow and interference with any normal use of such canals, streams and rivers and shall be disposed of in a manner and at locations satisfactory to IRHTP. Underwater spoil shall be spread to a height not to exceed six inches above the bed of lakes, canals, streams and rivers.
- 22.2.5. Contractors shall not begin work on lake, canal, stream or river crossings before obtaining approval from the IRHTP.
- 22.2.6. It is the intent of these specifications to require contractor to install the cable underneath the bed of the lake, canal, stream, river or water course at a depth of ten feet below the flow

line that shall prevent flood waters from affecting the cable by reason of the scouring action of the water. Particular attention shall be given to the location of sag bends in the cable so that they shall be located back in the lake, canal, stream or riverbanks beyond any point that would be affected by a change due to erosion of the banks.

22.2.7. Contractor shall give all notices and comply with all laws, ordinances, rules and regulations bearing on the conduct of the Work as drawn.

22.2.8. Unless specified otherwise, at individual stream crossings, the contractor shall be required to:

22.2.8.1. Grade banks of stream crossings by pulling the spoil back from the bank. Subcontractor shall not push the spoil out into the stream to grade the approaches.

22.2.8.2. Refrain from the use of cofferdams or from diverting the stream in any way in order to construct a stream crossing.

22.3. Attachment to Bridges (Non-Freeway)

22.3.1. Pipe for bridge attachments shall be hot-dipped galvanized rigid steel. Attachments to steel bridges will be accomplished by the use of approved galvanized beam clamps and hangers. Drilling steel bridge structures is not allowed. The attachment to concrete bridge structures will be accomplished by the use of expanding anchor bolts in drilled holes. The use of driven or explosive set anchors will not be permitted when not shown on plans. Exposed ducts shall be supported at intervals of 6' or less. Approved expansion joints will be installed at all bridge structure joints and in no case will exceed 100 LF intervals. Weep holes of 1/4" diameter will be drilled at 20' intervals, and 12" above ground level.

22.4. Bored Canal Crossings

22.4.1. Irrigation canals requiring boring shall be bored in accordance with Paragraph 13.0, Highway, Railroad and Other Bored Crossings.

23. CABLE MARKERS

23.1. Location

23.1.1. Cable markers will be furnished by the IRHTP and shall be placed within 48 hours of cable installation. Cable markers shall be placed at all change in directions, splices, fence line crossings, at road and stream crossings, and at other points on the route not more than 1,000 feet apart.

23.1.2. Cable markers shall be located as directed by the IRHTP.

23.1.3. In addition, on highway (non-freeway) right-of-way, the markers shall be located at the highway right-of-way line. Markers shall always be located so that they can be seen from the location of the cable.

23.1.4. In addition, in freeway right-of-way, the markers shall be placed not more than 1000 feet apart in rural areas and 500 feet apart in urban areas. Signs will be required on each side of all transversing public roads on streets at a point where the freeway right of way line intersects the transversing public road or street right of way line. Signs shall be placed within the right of way fence line, at line of sight.

24. RIGHT-OF-WAY PROTECTION AND RESTORATION

24.1. General

24.1.1. The contractor shall protect the right-of-way and minimize the damage from construction operation.

24.1.2. Good soil erosion practices shall be practiced during all construction operations.

24.1.3. Depending on the location of the work, the Federal Environmental Protection Agency, the State Environmental Protection Agency or others may stipulate construction practices and crew behavior requirements in or around environmentally sensitive areas, such as cultural

resource sites. Contractor shall adhere to any such stipulated construction practices and crew behavior requirements.

24.2. Restoration

- 24.2.1. Contractor shall keep the premises where work is being performed in a neat, clean, and orderly condition, and on completion of the work hereunder, contractor shall remove from the premises all of its tools and equipment, and any debris shall be removed and disposed of by contractor.
- 24.2.2. The right-of-way shall be restored to its original or better condition within 24 hours or as soon as practicable, in the IRHTP's opinion, following cable placing operations.
- 24.2.3. Where the cable is plowed in place, restoration shall be accomplished by driving a tractor or heavy truck over the plow furrow until the plowed area conforms to the surrounding terrain. A vibratory roller having a weight of three tons and a width of 4-6' may also be used.
- 24.2.4. In areas where open trench methods were used and backfill mounded over the trench, grading or filling will be required for final restoration of the right-of-way.
- 24.2.5. All rock and debris brought to the surface and left after backfilling shall be removed and disposed of, as directed by the IRHTP.
- 24.2.6. Improved landscape, lawns, shrubs, and hedge removed or damaged on the right-of-way shall be replaced. Lawns shall be repaired by re-sodding with like grasses.
- 24.2.7. The contractor shall promptly repair or replace any other property damaged during construction.

25. COEXISTENCE ON HIGHWAY RIGHT-OF-WAY

- 25.1. The cable route will parallel public highways and the cable will be laid within the highway right-of-way.
- 25.2. All work performed on public road right-of-way shall be completed in accordance with requirements and regulations of the authority having jurisdiction. It is the contractor's responsibility to be aware of, and comply with, all regulations and requirements pertaining to his work. The contractor shall be familiar with the location of "scenic enhancement areas" and with special requirements for construction on highway rights-of-way in such areas.
- 25.3. Unless otherwise specified on the drawings or by the Contractor, the cable shall be installed as close as practicable to the highway Right-of-Way line. If terrain or man-made obstruction(s) block the route, contractor shall modify the route with approval of IRHTP and the proper governmental authorities to avoid the obstruction.
- 25.4. Generally, the cable shall be buried in accordance with section 6.0, Depth of Burial. At particular locations, the cable depth will be controlled by depths of the facilities crossed (i.e. drainage, bridge structures, buried cables and/or other facilities.)

26. FENCING

- 26.1. The temporary fencing erected around contractor's excavations located outside of city limits shall be type 47 field fence or as approved by IRHTP. Temporary fencing around excavations inside the city shall be installed utilizing safety fencing to the satisfaction of the IRHTP.
- 26.2. Contractor, having first ascertained from IRHTP that permission has been secured from the landowner and/or tenant, shall build suitable temporary fencing and/or wire gaps in the fences crossing the route of the cable and maintain the same so that livestock shall be prevented from entering or leaving the property. Before cutting such fences to make these gates, contractor shall brace the fence to prevent damage. Gates shall be so constructed that they can be securely closed, and where necessary contractor shall furnish a watchman to maintain gates to prevent livestock from entering or leaving property and shall also furnish watchmen in any instance where required to do so by Contractor. Such temporary fences or gates shall be provided with suitable fasteners and shall be kept closed at all times except when necessary to be opened for construction purposes.
- 26.3. Following the completion of the cable construction, temporary gates shall be removed. All fences which have been cut or removed during the construction work shall be repaired by contractor in a first class and substantial manner and to match the original style of the fence, so far as possible. Where there is any doubt in the opinion of the IRHTP as to the usability of old fence material,

contractor, at its own expense, shall furnish new wire and suitable post to rebuild said fence. Fence repairs shall be subject to approval of both the property owner and IRHTP.

27. BUILDING SPECIFICATIONS

27.1. Installation Requirements

- 27.1.1. Installation shall comply with the latest edition of The National Electrical Code and other national, state and local codes as applicable.
- 27.1.2. Pull boxes will be required after 180 degrees of directional change and after every 120 feet of vertical rise (10 floors). Pull boxes will be mounted securely to the building structure and will not depend on the conduit for support. Pull boxes shall have removable covers and will be installed in such a way that the covers will be accessible.
- 27.1.3. Relocating and/disconnecting of any existing equipment within the building shall be coordinated with building management.
- 27.1.4. All metallic conduits shall be bonded to the building ground system.
- 27.1.5. All conduits shall be sealed (plugged), after cable installation at the point of interface and will be clearly marked to facilitate location.
- 27.1.6. Pull boxes should be clearly marked "IRHTP" on the cover for identification.

27.2. Material Requirements

- 27.2.1. Materials will comply with those standards as established by UL or NEMA and shall be commercial grade. All materials will be new and free from defects.
- 27.2.2. Conduits shall be one and one quarter inch (1 1/4") EMT (Electrical Metallic Tubing). EMT fitting shall be gland or set screw type, and each conduit shall be equipped with a graduated pull tape or rope. The exact requirements for location of conduit within the building shall be verified with the building owner.
- 27.2.3. Large radius sweeps shall be provided where required for offset or change in direction of conduit. The minimum radius recommended is 36", and the minimum radius acceptable is 24". If it is not possible to provide 24" minimum radius sweeps, pull boxes providing the same radii capability will be required.
- 27.2.4. Pull through pull boxes will be typically 6" high x 6" wide x 24" long with the conduit entering at each end. Pull boxes shall meet code requirements and will generally be placed to improve ease of pulling cable and inner-duct.
- 27.2.5. The cable will be secured at pull boxes on vertical runs with IRHTP-approved split Kellum grip as determined by the IRHTP representative.

28. SPLICING

- 28.1. Direct Buried Splices - At points where the IRHTP determines a buried splice should be placed, the contractor will excavate, secure, fence, and protect a splice pit to accommodate placing the cable splice (by others) at the same depth as the cable installation. The splice pit will be left open until the splice is completed at which time contractor will return and complete backfill and restoration work as required by the authority with jurisdiction in the area. Slack cable footage will be coiled and placed vertically in line with the cable route at sufficient depth that the highest point in the loop and splice closure is a minimum of 36" below the surface. The coil diameter will be a minimum of 30". The contractor shall backfill with selected fines to a level 6" above the closure and coil and continue the backfill as required.
- 28.2. Splicing at Hand holes - At points where branch splicing occurs, as shown on drawings, or directed by IRHTP, the contractor will place a hand hole as per the specifications and manufacturer's suggested methods. Contractor will secure, fence and protect the hand hole excavation and maintain a safe open pit to allow a splice to be completed (by others) and placed in the hand hole. After splice is placed, contractor will return and complete backfill and restoration work as required by the authorities with jurisdiction in the area.

- 28.3. At all splicing locations contractor shall also install a SIP 40 pedestal, an 8' ground rod and connect the two via a #6 ground wire. Contractor shall also install a 1-1/4" HDPE conduit at 36" depth between the hand hole/splice pit and the SIP 40 for use by others.

29. CONCRETE

29.1. Description

- 29.1.1. This section covers the material requirements and placing of Portland cement concrete for roadways, driveways, sidewalks and other planned concrete works.
- 29.1.2. Concrete shall consist of a mixture of Portland cement, water, fine aggregate, coarse aggregate and approved additives, when required, mixed in the proportions as specified below or approved by Contractor.
- 29.1.3. Where permits apply to Work, concrete shall conform to the permit requirements.

30. MATERIAL REQUIREMENTS

30.1. Concrete Materials

- 30.1.1. Portland cement shall conform to the requirements of AASHTO M85 and shall be Type II (low alkali).
- 30.1.2. Aggregate shall conform to the requirements of the IDOT for the specific use.
- 30.1.3. Water used in mixing or curing shall be reasonably clean and free of oil, salt, acid, alkali, sugar, organic vegetation, or other substance injurious to the finished product. Water may be tested in accordance with and all requirements of AASHTO T-26. Water known to be of potable quality may be used without test.
- 30.1.4. Air-entraining mixtures, when required, shall conform to the requirements of AASHTO M-154 (ASTM C-260).
- 30.1.5. Reinforcing steel for concrete reinforcement shall meet Grade 60 requirements for of ASTM A-615. Welded wire fabric for concrete shall conform to AASHTO M-55 (ASTM A-185). All bars and welded wire fabric shall be properly bundled and tagged with weather resistant tags.
- 30.1.6. The Subcontractor shall submit a supplier's mix design and material certifications for the mix being supplied one (1) week in advance for review and approval. No concrete shall be used on the project before mix design has been submitted and approved.

30.2. Concrete Classes

- 30.2.1. Concrete shall be of the class specified and as appropriate for the item for which it is being placed. Water content shall be controlled to produce a slump between two (2) and four and one-half (4 1/2) inches.
- 30.2.2. Classes of concrete and minimum strength and cement content shall be as follows:
- 30.2.2.1. Encasement Concrete. Class 3000 S&G shall be as sand/gravel mix with not less than 5.5 sacks (516 lbs) Portland cement per cubic yard to produce a twenty-eight (28) day compressive strength of 3000 psi. This class may be used for bedding concrete and encasement concrete in most locations.
- 30.2.2.2. Sidewalk and Driveway Concrete. Class 3000 CA shall be fine aggregate/coarse aggregate mix with not less than 5.5 sacks (516 lbs) of Portland cement to produce a twenty-eight (28) day compressive strength of 3000 psi. This class may be used for bedding, encasement concrete, sidewalks, and driveways.
- 30.2.2.3. Paving Concrete. Class 4000 CA shall be a fine aggregate/coarse aggregate with not less than 6.5 sacks (610 lbs) of Portland cement to produce a twenty-eight (28) day compressive strength of 4000 psi. This class may be used in structures or roadway pavement. The mix proportions including air entrainment and other additives shall meet the requirements of Highway Department of the State in which concrete is being placed.

30.3. Placing



- 30.3.1. The Subcontractor shall notify the Contractor at least twenty-four (24) hours in advance of placing concrete to permit proper inspection and approval of forms and reinforcement by the Contractor.
- 30.3.2. Concrete and reinforcing steel shall be placed at the locations and in accordance with the details shown on the Plans.
- 30.3.3. No concrete work shall be done when the air temperature is below forty (40) degrees F, or if freezing weather is predicted before final set of the concrete, unless special means of heating and/or protecting the work are used for a period of at least seventy-two hours after it is poured. Concrete shall not be placed on frozen sub-grade.
- 30.3.4. Where splices in reinforcing steel are necessary, the bars shall be lapped twenty-four (24) times their least diameter.
- 30.3.5. Concrete shall be of workable consistency with slump between two (2) and four and one-half (4 1/2) inches when placed. It shall be compacted by spading or by mechanical vibrator to prevent honeycomb. The concrete shall be spouted so that the total free drop will not exceed six (6) feet. No concrete shall be used which has partially set before final placing or which has segregated in transport. Re-tempering will not be permitted.
- 30.3.6. All concrete shall be placed monolithically so that fresh concrete shall not be placed against concrete that has taken initial set except where construction joints are required.
- 30.3.7. All surface concrete shall be cured for a period of seven (7) days with a water saturated covering or by other approved methods that will keep all surfaces continuously wet.

30.4. Measurement and Pavement

- 30.4.1. Concrete shall not be measured and paid as a separate item but shall be subsidiary to the cost of applicable item for which the concrete is placed.
- 30.4.2. The furnishing and installation of reinforcing steel shall not be measured separately but shall be considered subsidiary to concrete work.

PART 6 - SPECIFICATIONS FOR AERIAL PLACEMENT OF FIBER OPTIC CABLE

1. GENERAL

- 1.1 General. All IRHTP owned poles and/or cable will be identified with ID tags. All cables will meet all standards set up by NESC, agencies of cities, state, county, federal government, railroads or other entities which provide for the placement of IRHTP facilities within their respective rights of way.
- 1.2 Lengths. Use the longest lengths to facilitate construction costs, placement, and splicing. Entire reels can be placed without splice points to minimize transmission loss and reduce splicing costs.
- 1.3 As-builts. Will reflect span measurements, size, class & ownership (percent of ownership if applicable) of all poles joint use and IRHTP owned. All IRHTP owned/leased poles shall be identified with ID tags and size of messenger. If over-lashing is used: who owns messenger and/or other cables (type, size, gauge if applicable) involved in over-lashing. The clearance height at mid-span at the completion of construction, all sequence numbers at each pole will be recorded as well as: location of all MGN grounds, size and lead of guying and size and type of anchor.

2. PLACEMENT

2.1 Minimum Bending Radius

141. Nominal Cable Diameter	142. Minimum Bend Radius (No Tension) Installed	143. Minimum Bend Radius (Under Tension)
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143.1 Millimeters	143.2 Inches	143.3 Millimeters	143.4 Inches	143.5 Millimeters	143.6 Inches
6.0-10.0	¼ -3/8	10.0	4.0	15.0	4.0
10.1 - 15.0	4/10 - 6/10	15.0	6.0	22.5	9.0
15.1 - 20.0	10/16 - 8/10	20.0	8.0	25.0	10.0
20.1 - 23.0	13/16 - 9/10	23.0	9.0	25.0	10.0
23.1 - 25.0	15/16 - 1.0	25.0	10.0	30.0	12.0

- 2.2 Figure – Eighting Cable. If the cable must be unreeled during installation, use the “figure - eight” configuration to prevent kinking or twisting. Fiber optic cable should not be coiled in a continuous direction except for lengths of 30 meters (100 ft) or less. The preferred size of the “figure - eight” is about 4.5 m / 15 feet in length, with each loop about 1.5 m / 5 feet to 2.4 m / 8 feet in diameter. Do not cut the cable under any circumstances without consulting the IRHTP field engineer on the job.
- 2.3 Dip Pole. At a dip pole, form a minimum of a 100-foot expansion loop using “snowshoes”. Identify the cable with a caution tag. Protect the cable on the pole with “U guards,” 18” inches below the strand to just above ground level.
- 2.4 Planning and Preparation.

- 2.4.1 Poles. Determine the ability of existing pole lines and guys to support the new cable plant, as well as any restrictions imposed by the pole owner. The guying should remove all of the lateral stress on each pole so that the pole simply supports the weight of the cables, hardware and equipment attached to it. Stated another way the facility being constructed should be supported independent of all other facilities on the pole line. Obtain a written contract from the owner of poles with IRHTP as the owner of the facility being placed on the pole line. Contract will state all the fees associated with the attachment either on a one time or annual basis. The written contact with owner of poles will also state the pole/strand replacement

policy/cost involved. Obtain all necessary permits from the governing bodies involved. Contact the Iowa One Call system when placing new poles and anchors.

- 2.4.2 Clearances and Separations. On a case-by-case basis determine the clearances between the proposed fiber optic cable and the existing facilities. Be certain that the proposed facility is constructed according to the National Electrical Safety Code (NESC) and the appropriate local safety codes. See Example 1.29. The fiber optic cable should occupy the uppermost available communication space on the pole due to its small weight and resultant sag.

ITEM		URBAN
		FEET AT MAXIMUM SAG
Where cables guys, line, or drop wires run along and within the limits of : a) Public highways, streets, and roads b) Public alleys c) Ways accessible to pedestrians only		18' 15.5' 12'
Where cables, guys, line or drop wires cross over private property or ground a) Accessible to pedestrians only b) Accessible to people on horses or loaded farm vehicles		9.5' 16'
Where cables, guys, line or drop wires cross over: a) Public highways, streets and roads b) Public alleys c) Driveways in general unless height of loaded vehicles or equipment using drive requires extra clearance. d) Farm driveway - accessible to combines e) Driveways---residential garages f) Ways accessible to pedestrians only. g) Obstacles (billboards, roofs) h) Flat roofs which may be used by tenants or workmen. i) Railroads --- cable on messenger j) Waterways (rivers, canals, etc.) provide clearance specified by proper authorities and on work plans. (Human with fishing pole) + Secure additional clearance on new construction when warranted at specific locations.		18' +15.5' +15.5' 18' 15.5' 12' 2' 9.5' 27' 14'
MINIMUM CLEARANCE ABOVE GROUND FOR TELEPHONE FACILITIES		
TYPE OF CROSSING WIRES & CABLE		TELEPHONE CABLES, MESSENGER, DROPS, AND GUYS
		CROSSING OVER CROSSING UNDER
Open supply wires 0-750 volts & supply cables having effectively grounded sheath or messenger - all voltages. a) Line wires b) Service wires		4' 2'4'
Open supply, line or service wires a) 750 - 8700 volts b) 8700 - 50,000 volts		6' 6'
Foreign guys, span wires, lightning protection wires		2'2'
Foreign communication wires, cables, and fire alarm wires		2'2'
Trolley contact conductors. a) 750 volts or less b) 750 - 8700 volts		4' -----6'
* Clearance for (a) may be reduced to 4 feet if crossing is more than 6' from communication pole.		
Note: The above clearances apply where the crossing span length of the upper conductor or wire does not exceed 175 feet. For greater span lengths, increase clearances in accordance with NESC.		

3. LASHED AERIAL PLANT

3.1 General. Fiber optic cables must be installed without loose lashing, twisting, or weaving along the strand.

3.2 Suspension Strands

3.2.1 Suspension strands are susceptible to fatigue failure near pole-mounted suspension clamps if left under critical stringing tensions without supporting a load. Refer to the table below for the rated breaking strength and the type of steel used.

DIAMETER

146 RATINGS	147 EHS	148 UG
6M	1/4"	5/16"
10M	5/16"	3/8"
16M	3/8"	7/16"
20M	7/16"	1/2"

"M" indicates the approximate breaking strength in thousands of pounds. "UG" or EHS indicates the tensile strength of the steel used in the messenger.

3.2.2 Refer to the table below for the minimum stringing tensions for a particular cable weight using different messenger grades. Messenger tensions listed are the minimum tensions required for each span to reduce cable strain.

**Minimum & Critical Messenger Tensions in Pounds Prior to Aerial Installation of Fiber Optic Cable
Maximum 0.18 lb/ft, 0.80 Inches Diameter Cable, (Using EHS Messenger, Not UG)**

149 Messenger		150 Span		
	Up to 200'	200 - 300'	300 -400'	Critical Tension
6M EHS 1/4"	1200 lbs	1600 lbs	----	2000 lbs
10M EHS 5/16"	1500 lbs	1800 lbs	2400 lbs	3000 lbs
16M EHS 3/8"	1800 lbs	2200 lbs	2600 lbs	6000 lbs

**Maximum 0.16 lb/ft, 0.68 Inches Diameter Cable
(Using UG Messenger, Not EHS)**

6M UG 5/16"	1600 lbs	---	---	---
10M UG 3/8"	1800 lbs	2200 lbs	2500 lbs	---

3.2.3 When specifying a strand for fiber optic cable, the two most important considerations are; (1) strength of strand and (2) excess cable stretch does not occur. When the diameter of a strand is enlarged to increase its strength, its weight and the effect of wind and ice loading is affected, which increases cable strain. Normally the "best" stand is not the question, but rather if the normal strand is satisfactory. Technically, the smallest EHS messenger with a satisfactory strength is "best". When installing a dedicated suspension strand for fiber optic cable, standard hardware (eyebolts, clamps, etc) should be used.

3.3 Overlapping.

3.3.1 Considerations

3.3.1.1 Maximum span length (pole spacing)



- 3.3.1.2 Size of the existing messenger
- 3.3.1.3 Messenger- EHS or UG?
- 3.3.1.4 Weight & diameter of the existing copper (or fiber) cable(s)
- 3.3.1.5 Initial messenger tension (If not available, what is the present messenger tension? Measured at what temperature?)
- 3.3.1.6 Age of the existing copper (or fiber) cables
- 3.3.1.7 Loading conditions. In the Midwest IRHTP will consider only a heavy loading.
- 3.3.1.8 Size of the fiber cable being installed (cable, weight, O.D., etc).

3.4 Bonding and Grounding

- 3.4.1 If dielectric aerial cable is used, maintain the dielectric properties by using non-metallic lashing materials.
- 3.4.2 If using a metallic messenger or non-dielectric aerial cable on a joint use pole and/or a separate pole line form a continuous bond between all metallic items being placed and the MGN (multi-grounded neutral) used by the power company and/or any other entity occupying the same pole line use. The purpose behind the aforementioned is to eliminate different electric potentials between independently owned facilities occupying the same pole line. No communication cable on a MGN system will have less than 4 grounds per mile. A non-dielectric aerial cable must occupy the communication space as defined by the National Electrical Safety Code. A dielectric fiber optic cable may occupy either the supply or the communication space on joint use construction. No communication cable shall occupy the space between what is defined as the communication and the supply space. Refer to NESC Section 224, par. 4 & 230F. Quote from NESC: Section 235C, E3; Note that a fully dielectric fiber optic cable carried on a nonmetallic messenger is considered as a supply neutral meeting Rule 230E1 (if located in the supply space) or an ordinary communication cable (if located in the communication space). Such cables must be located either in the supply space or the communication space, not in the safety zone between the two spaces.
- 3.5 Drip Loops Definition. A smooth-curve type loop form at each pole. The use of the 3" drip loop at each pole is required by the IRHTP for two reasons: 1) the extra slack provides for expansion and contraction by the messenger, 2) it provides extra slack if object falls on the messenger. Example: Prevents cable damage if a tree falls on the strand. Do not exceed the minimum bending radius of the cable. If contact is likely between the loop and the pole a cable guard will be required. Refer to Example for drip loop. Each drip loop will have the cable sequence numbers recorded and the IRHTP cable will be identified with an IRHTP ownership tag.
- 3.6 Lashing. Fiber optic cables must be installed without loose lashing, twisting, or weaving along the strand. Contractor will replace any cable showing a deformation. Example: Rippling, or kinking. REQUIREMENTS: Contractor will provide one wrap of lashing wire per linear foot when lashing IRHTP fiber optic cable to messenger. Cable will be double lashed in 3 different circumstances: 1) over-lashing over existing aerial cables, 2) right of way to right of way over railroads, 3) right of way to right of way over roadways. Cable will be lashed up on a span by span basis. All lashing wire should be terminated at each pole with a lashing wire clamp. Lashing wire will be terminated by placing a cable spacer between the fiber optic cable and strand. Locate the lashing wire clamp 2 inches from the strap and spacer. Pull out enough lashing wire for termination on to the lashing wire clamp. Wrap the lashing wire 3 times around only the strand between the lashing wire clamp and the planned location of the first wrap around both the strand and the fiber optic cable. Lashing wire should follow the spiral of the strand wires.
- 3.7 Splicing and Slack Storage. All cables will be butt spliced. All slack-cable loops will be placed a minimum of 4 feet from the pole using snowshoes. The minimum cable coil required at a splice location will be from the strand to ground level plus 20 feet on each side of the splice. In no case shall the splicing be done from a bucket. All splicing will be done on the ground in a protected environment (tent, van, or trailer). A minimum of a 100 foot cable coil (placed in snowshoes) will be required in the following circumstances: 1) railroad crossings, highway crossings, 3) Interstate crossings, 4) main thoroughfares in cities.

PART 7 - SPLICING AND TESTING

1. **GENERAL.** This document addresses the IRHTP requirements for splicing, testing, documenting and enclosing fiber optic cable for use as part of the IRHTP system.
2. **ACCESS TO WORK.**
 - 2.1 The Cable installer is required to provide their access to all splice locations.
 - 2.2 Access to splice points at all locations other than the freeways can be made from the shoulder of the road. In no case is access from freeways allowed from the shoulder of the road or ramps. No stopping or parking is allowed on the freeway.
 - 2.3 The Cable installer shall be responsible to repair any damages that it may cause to the right-of-way.
 - 2.4 The cable will be stored in hand holes at all splice locations. The Cable installer shall be responsible to access the cable at the splice locations and shall have equipment for removal of loose dirt and water or the removal of other obstructions to the performance of the Cable installer's work.
3. **MATERIAL.** The Cable installer shall be required to supply all material, tools, test equipment, splicing equipment, consumable items, and incidentals necessary to access the cable at the splice locations, perform quality splicing, termination, and testing to include, but not necessarily be limited to the following:
 - 3.1 Enclosure, inner-closure, splice trays, heat shrink sleeves and encapsulate.
 - 3.1.1 The splice closure shall be the Raychem FOSC 450 Fiber Optic Gel Closure or equivalent.
 - 3.1.2 Wire tags with clear heat shrink tubing for #6 insulated ground wire such as Panduit #HSDL9-50-31 or approved equal.
 - 3.2 #6 green insulated ground wire, mechanical lugs and bolts, nuts and washers for grounding terminations and cable sheath bonds.
4. **PRE-PLACEMENT CABLE TESTING.** In order to minimize the amount of rework in the right-of-way, which may be required and to check for fiber optic cable defects, the Cable installer shall be responsible for on reel verification of cable quality prior to placement.
 - 4.1 One hundred percent (100%) of the cable's fiber count shall be tested at 1310 and 1550nm with a Tektronix TFP2 or equivalent Optical Time Domain Reflectometer (OTDR), a stabilized light source and optical power meter, or, equivalent test equipment. Test results will be recorded on a form supplied by the IRHTP. Completed test forms on each reel shall be handed over to the IRHTP field engineer.
 - 4.2 Cable ends shall be sealed upon completion of testing.
5. **ULTIMATE RESPONSIBILITY.** The Cable installer shall be ultimately responsible for providing installed fiber cable in which each fiber meets the specifications set forth in this standard.
6. **SPLICES.**
 - 6.1 All splices shall be placed in hand holes. There are to be no direct buried splices.
 - 6.1.1 Cable and closure preparation shall conform to the manufacturer's standards and installation manuals.
 - 6.1.2 Hand holes and pedestals shall be compatible with existing IRHTP components
 - 6.2 All fibers are to be spliced according to the splice assignment sheets provided by the IRHTP.
 - 6.3 All fibers are to be fusion spliced and placed in a Raychem FOSC 450 Fiber Optic Gel enclosure according to the manufactures technical installation instructions and a workmanlike manner.

- 6.4 All spliced fibers shall be protected by using the appropriate organizer tray and associated incidental items. If fiber optic heat shrink sleeves are used, a heat oven shall be used to shrink all sleeves. Care must be exercised to prevent damage to exposed fibers by overheating.
- 6.5 To insure acceptable splices prior to closing and encapsulating the splice case, the Cable installer shall monitor the splicing while it is being performed using an OTDR or a splicer with some type of optimizing capability, such as an LID unit or an optimizing alignment screen, or equivalent.
- 6.6 Splice Grounds (Refer to Example 1.26 - 1.27)
- 6.6.1 A number six (#6) insulated ground wire shall be installed from the SIP (pedestal) through the existing conduit to the splice enclosure and terminated at both ends. SIP termination nuts shall have a 3/8 inch head.
- 6.6.2 The ground wire at the SIP shall be identified with major direction associated with the running line of each of the links, e.g., WEST, on heat-shrink ID tags.
- 6.7 The IRHTP reserves the right to accept a splice at any time and waive the above requirements on a case by case basis as relates to splice loss. A waiver at any time shall not be construed to be a relinquishment of any requirements as spelled out in this specification.
- 6.8 Vendor must verify that all fibers are compatible end-to-end. That is fiber number 24 at location A is fiber number 24 at location Z.

7. LOSS SPECIFICATIONS.

- 7.1 The maximum acceptable loss for the cable shall be:

- 7.1.1 0.35 dB/km @ 1310 nm
7.1.2 0.25 dB/km @ 1550 nm

- 7.2 The maximum acceptable loss per splice shall be:

- 7.2.1 Maximum splice loss in one direction shall be 0.2 dB.
7.2.2 Maximum bi-directional average splice loss shall be 0.2 dB.

- 7.3 Maintenance splice loss allocation. Each link shall have sufficient reserve loss margin at acceptance to accept the loss associated with six (6) future maintenance splices and still meet the link unallocated gain margin.

8. SPLICING AT ACTIVE LOCATIONS.

- 8.1 The Cable installer shall be notified of fibers in the area that are active. It shall be the Cable installer's responsibility to coordinate and supervise all work so that there is no interruption of service on these active fibers during cable/closure prep, splicing, testing, and so on at end points.
- 8.2 The Cable installer shall notify the IRHTP or its authorized representative at least five (5) working days prior to the commencement of any work at splice points with active fibers.
- 8.3 The Cable installer shall have a responsible supervisor monitoring all work being done at all splice locations having active fibers present.
- 8.4 Unless IRHTP or another governing agency (such as the ICN) grants an exception, all splicing on fiber sheaths containing active fibers will be done between the hours of midnight (00:00) and 6:00 AM local.
- 8.5 The Cable installer shall have all the materials required to make a temporary and or a permanent repair in the event a fiber is damaged in the course of work. The materials shall be at the site of the work prior to any work beginning. The Cable installer shall notify the IRHTP immediately in the event an active fiber is damaged.

- 8.6 In the event that active fibers are damaged by the Cable installer, the Cable installer shall supply all resources necessary and directed by the IRHTP to reestablish service on the active fibers. All costs relating to the damage of the active fibers shall be the responsibility of the Cable installer.

9. TESTING

- 9.1 All test equipment shall be calibrated within ninety (90) days prior to testing. A sticker with the date of calibration shall be fixed to the equipment. A calibration certificate shall be presented to the IRHTP or its authorized representative upon request.
- 9.2 Each span shall be tested bi-directionally from end point to end point. Each span trace shall be recorded so that each splice can be clearly expanded (long range, mid range or high resolution). Some spans will need all three traces. A span map shall be filled out recording each splice loss from each direction and the optical length between splices as well as any other information required by the span map.
- 9.3 The Cable installer shall be required to perform the following tests:
- 9.3.1 Damaged Cable. In the event it is suspected that the cable has been damaged by the Cable installer at any time, the Cable installer will be required to test the cable with an OTDR. A hard copy of the OTDR test shall be submitted to the IRHTP representative. The Cable installer shall be prepared to test the damaged cable within 24 hours of notification by the IRHTP's representative.
- 9.3.2 End to End Bi-directional OTDR Span & Splice Test. Each fiber of each span is to be tested bi-directionally at 1310 nm and or 1550 nm as directed by IRHTP from end point to end point and record of results submitted to IRHTP for acceptance.
- 9.3.3 Cable Sheath. The cable sheath of each installed reel of cable shall be tested for continuity and the results recorded on the span map.

10. ACCEPTANCE CRITERIA. The acceptance criteria shall satisfy, as applicable, the requirements of this standard which includes:

- 10.1 Verifying, and documenting, that at least a 3 dB unallocated margin of gain exists, at 1310 nm, on each link.
- 10.2. All as-built drawings as specified in the Iowa Communications Network As-Built Drawing Conventions and Symbols Standard.

11. MARKERS. All splice hand holes shall be marked with an IRHTP Cable signs (furnished by IRHTP) at the top of the post and an IRHTP Splice sign mounted on the post just below the IRHTP Cable sign.

12. DOCUMENTATION

12.1 Splice Identification

- 12.1.1 Link Splices. Splices interconnecting one or more links will be defined by IRHTP by the characters LS (link splice) and two or more identification characters, e.g., LS-13A.
- 12.1.2 Backbone Splices. Splices placed at the end of reels are referred to as backbone splices and numbered by the Cable installer in sequence for a given link, e.g., B1210-1, B1210-2, and so on.
- 12.1.3 Maintenance Splices. Splices that are required because of a maintenance or repair to the cable are referred to a maintenance splices and shall be identified as Maintenance Splice, MS"LINK #-"x", with "x" identifying the time sequence that the splice was made, e.g., MS1210-1 is the first maintenance splice made on Link 1210. The Cable installer will assign MS identification codes to maintenance splices all unaccepted links. On accepted links, the Cable installer will identify the time sequence that the splice was made and request a splice identification code from the IRHTP.

12.2 Documentation Package

12.2.1 The following hard copy documentation package shall be submitted to the IRHTP on the applicable forms within five (5) working days after completion of the span splicing and testing, or a minimum, of thirty days prior to the commencement of acceptance testing. Each package shall be neatly organized, with dividers in a separate loose leaf, 3 ring binder or other IRHTP approved binder. All forms shall be completely filled out. All forms and OTDR shall be legible and reproducible. All sheets/forms shall have a revision log and be titled and dated.

12.2.1.1 A splice identification sheet.

12.2.1.2 A span map for each span.

12.2.1.3 The splice assignment sheets.

12.2.1.4 Reproducible copies of each span trace.

12.2.1.5 Reproducible copies of splice traces.

PART 8 - AS-BUILT DRAWING

1. INTRODUCTION

- 1.1 Delivery Method. Two sets of legible, reproducible as-built drawings on 11 X 17 inch, white paper, in a hard cover binder shall be provided for each link. If available, it would be desirable to also have a set on a 3.5 inch diskette in a format compatible with the IRHTP's computer aided design (CAD) system. The IRHTP's current CAD system is an AutoCAD, Release 2002 or newer.
- 1.2 Symbols and Conventions. The as-built drawings are to use symbols and conventions specified in this document. If not specifically stated, the symbols and conventions to be used are those considered required by good engineering drawing practices. The vendor is to provide to the IRHTP, any symbol, icon, model, block, and so on that is used on, or as part of, the as-built drawings provided for any part of the IRHTP. These symbols, icons, models, blocks, and so on, are to be provided as defined in section 1.1.0.
- 1.3 Consistency. A key requirement is for the symbols, conventions, practices, scale, and so on, to be consistent from one drawing to the next.
- 1.4 Governing/Authorization Agency Permits. Where there is a governing agency permit associated with one or more as-built drawings, there shall be correlation between the method of showing project from and to points on the permit and the as-built drawings. For example, where an Iowa Department of Transportation (IDOT) permit uses highway stationing (HWY STA.), the as-built drawings, which includes these particular permit points will, as a minimum, show HWY STA. numbers at the start and end of the particular drawing.
- 1.5 Link As-Built Drawings. The IRHTP consists of a series of spans, segments, and links. The specific start and end point of each span, segment, and link has been or will be defined by the IRHTP or its' authorized representative. Each link is identified by a unique set of characters. A set of as-built drawings is to be provided for each link.
 - 1.5.1 Each as-built drawing shall use the unique link identifier as part of the title, e.g., Link 1234, and will be included in the drawing number, e.g., DWG 1234-08 of 20.
 - 1.5.2 Drawing Revisions. As part of the title and status blocks, each drawing shall list the reason(s) that an individual drawing was changed.
 - 1.5.3 The first sheet of a set of link drawings shall be numbered DWG 0. It is a title page and shall contain:
 - 1.5.3.1 Link name/title.
 - 1.5.3.2 A revision table for each of the link drawings listing the current revision of each drawing.
 - 1.5.3.3 Cable specifications.
 - 1.5.3.4 To-from information, including start and end point identification such as mile post numbers, highway station numbers, and or other readily recognizable identifiers.
 - 1.5.3.5 A table listing each splice associated with the link, and, the drawing number containing that splice.
 - 1.5.3.6 A revision record for DWG 0.
- 1.6 Scale. While drawings scale is specified as "none", to achieve consistency, the typical landscape drawing has 14 to 15 inches of running line, covering about 0.5 miles. Where appropriate, a single 17 X 11 sheet may contain 2 drawings. No specific scale is required for the direction perpendicular to the running line except that it shall be consistent and, reasonable distance differences shall be obvious. Individual drawings may deviate from the above scale requirements for the sake of clarity.
- 1.7 Link Drawing Order/Sequence. Each set of link drawings shall read from left to right. That is, when the major direction of the link is east/west, the left side or edge of a drawing will show the match line for a more westerly/lower numbered drawing. When the major direction of the link is

north/south, the left side or edge of a drawing will show the match line for a more southerly/lower numbered drawing.

- 1.8 Highway Plan Drawings. If available, highway plan drawings from IDOT may be used as part of an as-built drawing for additional information.

2. SPECIFIC REQUIREMENTS

- 2.1 Highway Location Signs/Markers. When available, drawings shall show highway mile post numbers and highway stationing numbers.

2.2 Street, Road, Highway Identification

- 2.2.1 The highway marker number, e.g., county E-16, I-80, and so on, will be shown on all county, state, or federal highways that are on a drawing.
- 2.2.2 Most counties in Iowa have or are in the process of acquiring Extended 911 capability. Individual addresses are a requirement for this capability. Therefore, most, if not all, Iowa counties have assigned names to all county roads which are to be included on the drawings.
- 2.2.3 Multiple Identifiers: Where there is more than one identifying name and or number for a street, road or highway, all identifiers shall be shown on the drawing, e.g., V-24, OLD HOME ROAD, and so on.

- 2.3 County, Township, Range, Section(s). As a minimum, the first and last drawing of a set of link as-built drawings shall show the county, township name and identifier, range identifier and section number(s) peculiar to that particular drawing. When the county, township, or range changes in a link drawing sequence, the previous and the new county, township, range, or section shall be shown. The city, county, state boundary symbol shown on the LEGEND AND SYMBOL sheet is to be used. The preference is to have the county, township, range, and section specified on each drawing.

- 2.4 Fiber Cable Specifications. The fiber cable specification shall be shown on each page. See example drawings and the LEGEND and SYMBOL sheet.

- 2.5 Link Continuity. The first and last page of each set of link drawings shall show the connections/splices to the connecting link(s). The connecting links shall be shown with their respective link identification.

- 2.6 Revision Log. Each drawing shall include a revision table that is used once a drawing has been distributed and or released, whether it be a pre release, bid issue, as-built, and so on. The reason for the change shall be included in the table.

2.7 SPLICE IDENTIFICATION

- 2.7.1 Link Splices. Splices interconnecting one or more links will be defined by the IRHTP by the characters LS (link splice) and two or more identification characters, e.g., LS-A.
- 2.7.2 Backbone Splices. Splices placed at the end of reels are referred to as backbone splices and numbered in sequence for a given link, e.g., B1210-1, B1210-2, and so on.
- 2.7.3 Maintenance Splices. Splices that are required because of a maintenance or repair to the cable are referred to as maintenance splices and shall be identified as Maintenance Splice, MS"LINK #-"x", with "x" identifying the time sequence that the splice was made, e.g., MS1210-1 is the first maintenance splice made on Link 1210. The cable installer will assign MS identification codes to all unaccepted links. On all links that have been accepted by the IRHTP, the cable installer will identify the time sequence that the splice was made and request a splice identification code from the IRHTP.

ANNEX C
LINK-SEGMENT COMPLETION CHECKLIST
RFP 08-001

A LOCATION – (HCP end)

Cable was installed in a workmanship like manner.
Any exposed cable or jumpers are in accordance with applicable codes
Fiber Optic Cable is properly tagged and identified
Conduit was installed in accordance with HCP instructions
FDP or Bulkheads mounted properly and securely
All FDP or Bulkhead connectors were covered with dust covers
Grounding was accomplished in a workmanship like manner
All building penetrations were properly sealed.
All firewall or building partition penetrations were properly sealed
Restoration Phase I (Initial) was performed to the best of the contractor's ability.
All construction debris and dirt was removed to the satisfaction of the HCP
Locate wire pedestal location is readily identifiable and connected

ROUTE

Cable was installed in accordance with IRHTP specifications
All hand holes and tubs have been readjusted for settling
All open ends of duct installed along the route have been sealed with appropriate duct plug material
Any pavement cracked during the cable installation process has been repaired.
Were pictures that were taken of pre-existing pavement conditions compared to final route reconnaissance and reviewed by HCP, Property owners, and the appropriate governmental entity?
Restoration Phase I (Initial) was performed to the best of the contractor's ability.

CABLE TESTING

Test equipment was calibrated within ninety (90) days prior to testing. A sticker with the date of calibration was affixed to the equipment. A calibration certificate was presented to the IRHTP or its authorized representative upon request.

Each span was tested bi-directionally from end point to end point. Each span trace was recorded so that each splice can be clearly expanded (long range, mid range or high resolution). (Some spans will need all three traces.) A span map was filled out recording each splice loss from each direction and the optical length between splices as well as any other information required by the span map.

Each fiber of each span was tested bi-directionally at 1310 nm and or 1550 nm as directed by IRHTP from end point to end point and record of results submitted to IRHTP for acceptance.

Locate wires, cable sheathes, and/or locate wire terminals have been tested for continuity end-to-end
Boring Traces, As-built or red-line construction drawings have been handed off to IRHTP Representative

Z LOCATION – (Network endpoint or meet point)

Cable was installed in a workmanship like manner.
Any exposed cable or jumpers are in accordance with applicable codes
Fiber Optic Cable is properly tagged and identified
Conduit was installed in accordance with ICN instructions
Bulkheads mounted properly and securely
All unconnected bulkheads are covered with dust covers
Grounding was accomplished in a workmanship like manner
Tubs and hand holes have been properly closed
All duct and conduit seals have been replaced
Locate wire terminations are readily identifiable

SID _____ **HCP Name:** _____ **By:** _____

IRHTP Representative: _____ **Date:** _____



CHAPTER 4
EVALUATION CRITERIA
RFP 08-001

4.1 Award Process.

- 4.1.1 An evaluation committee assigned by personnel within the IRHTP will review the bid proposals. The evaluation committee will consider all information provided when making its recommendations and may consider relevant information from other sources.
- 4.1.2 The evaluation committee will make its recommendation to the IRHTP Project Coordinator indicating the committee's choice. The Project Coordinator will select the Vendor(s) to receive the award. The Project Coordinator is not bound by the committee's recommendation. All Vendors submitting Bid Proposals will receive notification of the award.
- 4.1.3 All applicable contracting requirements imposed by this RFP and Iowa law shall be met by the Vendor. The successful Vendor must, in a timely manner, enter into a Contract with the IRHTP to implement the service contemplated by this RFP. Failure of a successful Vendor to agree to the terms of a Contract within a timely manner may be grounds for the IRHTP to award to the next compliant Vendor.
- 4.1.4 The IRHTP will accept the most cost effective solution presented, whether that be a lump sum bid for all sites statewide, or a combination of site-by-site bids. The final list of sites in any merged area may be modified by the acceptance of IRUs if available.

4.2 Evaluation Criteria – Part I.

- 4.2.1 A Bid Proposal will not be evaluated if all of the Mandatory Requirements identified in Chapter 3 and Attachment 4 are not met and/or fulfilled.
- 4.2.2 The IRHTP may award a Contract to the most responsible Vendor meeting the requirements of this RFP and which, in the sole discretion of the IRHTP, provides the best value to the project after considering price and compliance with the provisions of Chapter 3.
- 4.2.3 The IRHTP is not required to accept a low site-by-site bid if the low bid for a site raises the cost of either the lump sum price for a statewide bid or the total cost of a complete Merged Area bid or the consideration of an IRU opportunity.
- 4.2.4 The IRHTP may award a statewide contract or a complete Merged Area Contract reserving the right to substitute an IRU cost for any particular site-by-site location when it is in the best interests of IRHTP to do so. (See Attachment 5 IRUs) In that event, IRHTP will delete the particular sites from the statewide list of sites in the final contract or in the final Merged Area contract.
- 4.2.5 In the event an IRU for a particular site is considered by the IRHTP, the apparent winning vendor will have first right of refusal to provide construction at same cost as the IRU if he so desires.

4.3 Evaluation Criteria Scoring – Part I

Overall Project Experience

IRHTP will take into consideration the number of like construction projects completed thus far by the vendor.

Cost Breakdown

Grasp of the Project and Design

Contractor demonstrates a clear understanding and grasp of the project. Response is clearly written and organized.

Vendor's Capabilities

Vendor has the necessary manpower and resources to accomplish the Work on schedule. Technical ability.

Credibility

Vendor's current reputation with established organizations and within the industry.

Vendor Agrees To:

- a. Submit invoices in accordance with USAC requirements.
- b. Proactively engage with the final audit team at no additional cost
- c. Submit all final construction drawings in the prescribed AutoCAD format.
- d. Provide machine generated traces documenting all boring depths

4.4 Evaluation Criteria Scoring – Part II

Overall Project Experience

IRHTP will take into consideration the number of like construction projects completed thus far by the vendor.

Cost Breakdown

Grasp of the Project and Design

Vendor demonstrates a clear understanding and grasp of the project.

Response is clearly written and organized.

Vendor's Capabilities

Vendor has the necessary manpower and resources to accomplish the work on schedule.

Technical ability.

Credibility

Vendor's current reputation with established agencies and within the industry.

Vendor Agrees To:

- a. Submit invoices in accordance with USAC requirements.
- b. Proactively engage with the final audit team at no additional cost
- c. Submit all weekly reports at the COB each workweek
- d. Provide update briefings when requested at no additional cost

ATTACHMENT 1 – PART I
OUTSIDE PLANT – SAMPLE AGREEMENT
CONTRACTUAL TERMS AND CONDITIONS
RFP 08-001

SECTION 1. TERM. This Agreement is effective [EFFECTIVE DATE WILL BE LISTED], and will continue through (project completion).

SECTION 2. DOCUMENTS INCORPORATED BY REFERENCE.

2.1 Incorporation of Bid Proposal Documents. The IRHTP RFP 08-001 and the Vendor's bid proposal in response to this RFP, together with any clarifications, attachments, appendices, amendments or other writings of the IRHTP or the Vendor (collectively bid proposal) are incorporated into this Agreement by this reference as if fully set forth in this Agreement.

2.2 Contractual Obligations of Vendor. The terms and conditions of the bid proposal and of the RFP are made contractual obligations of the Vendor.

2.3 Contents of Agreement. The parties acknowledge that this Agreement consists of this document as well as the RFP and the bid proposal and that the parties are obligated to perform as set forth in the RFP and the bid proposal to the same extent that they are obligated to perform the specific duties set forth in this document.

2.3.1 Order of Preference. In the case of any inconsistency or conflict between the specific provisions of this document, the RFP or the bid proposal, any inconsistency or conflict shall be resolved as follows:

2.3.2 First, by giving preference to the specific provisions of this Agreement.

2.3.3 Second, by giving preference to the specific provisions of the RFP.

2.3.4 Third, by giving preference to the specific provisions of the bid proposal.

2.4 Intent of References to Bid Documents. The references to the parties' obligations, which are contained in this document, are intended to change, supplement or clarify the obligations as stated in the RFP and the bid proposal. The failure of the parties to make reference to the terms of the RFP or bid proposal in this document shall not be construed as creating a conflict and will not relieve the Vendor of the contractual obligations imposed by the terms of the RFP and the bid proposal. Terms offered in the bid proposal, which exceed the requirements of the RFP, shall not be construed as creating an inconsistency or conflict with the RFP or this document. The contractual obligations of the IRHTP cannot be implied from the bid proposal.

SECTION 3. DEFINITIONS. The following words shall have the meanings set forth below. Words in the singular shall be held to include the plural and vice versa, and words of gender shall be held to include the other gender as the context requires. For the purposes of this Contract, the following terms and all other terms defined in this Contract shall have the meanings so defined unless the context clearly indicates otherwise.

3.1 "IHA" shall mean the Iowa Hospital Association

3.2 "IRHTP" shall mean the Iowa Rural Health Telecommunications Program

3.3 "Vendor" shall mean [Vendor will be listed].

SECTION 4. SCOPE OF WORK.



Scope of Work. The fiber optic cable facility to be constructed pursuant to and as a result of this Agreement by the Vendor is described and attached hereto as Schedule A and made a part hereof by this reference.

The Vendor shall prepare and deliver specifications to the IRHTP which will detail the design, technical and functional capabilities, look and feel, and other attributes related to the project, all as more fully described in Schedule A.

Amendments to Scope of Services and Specifications. The parties agree that Schedule A, Scope of Services, and the specifications, may be revised, replaced, amended or deleted at any time during the term of this Agreement to reflect changes in service or performance standards upon the mutual written consent of the parties.

Industry Standards. Services rendered pursuant to this Agreement shall be performed in a professional and workmanlike manner in accordance with the terms of this Contract and with generally acceptable industry standards of performance for similar tasks and projects. In the absence of a detailed specification for the performance of any portion of this Agreement the parties agree that the applicable specification shall be the generally accepted industry standard. As long as the IRHTP notifies Vendor promptly of any services performed in violation of this standard, Vendor will re-perform the services, at no cost to IRHTP, such that the services are rendered in the above-specified manner.

Non-Exclusive Rights. This Agreement is not exclusive. The IRHTP reserves the right to select other Vendors to provide services similar or identical to the Scope of Services described in this Agreement during the term of this Agreement.

SECTION 5. COMPENSATION.

5.1 Payment Terms – Progress Payments

5.1.1 USAC and IRHTP will disburse funds based on monthly submissions (*i.e.*, invoices) of actual incurred eligible expenses, and will respond to vendor invoices in accordance with its current bi-monthly invoicing payment plan. This invoice process will permit disbursement of funds to ensure that the selected Participants' network projects proceed, while allowing USAC and the FCC to monitor expenditures in order to ensure compliance with the program and prevent waste, fraud, and abuse.

5.1.2 Upon award of contract for a link-segment, the Vendor will assist the IRHTP project coordinator in the development of a USAC Network Cost Worksheet. (NCW) This work sheet will list the primary tasks to be completed for each link-segment. When specific line items are completed on each NCW, the Vendor may submit it for a progress payment. As soon as the line item completion is approved by the IRHTP project coordinator the vendor will be paid 15% of the line item amount by the specific HCP served by the link-segment. The Vendor will acknowledge receipt of the 15% payment and forward appropriate forms to USAC for payment of the remaining 85%. USAC will honor requests for payment twice each month.

The invoices when submitted must certify by signature that all construction specifications were met during the covered period on the specified segment and show the contract number and project/site number on each invoice. If the IRHTP disputes the amount of any invoice, the IRHTP will notify the Vendor of the dispute within 10 days of receipt of the invoice. IRHTP may withhold payment of the disputed amount until the dispute is resolved

5.1.2.1 Retainer - Payment tied to Performance. The IRHTP shall withhold 10% of the fee for the project until the IRHTP has provided Final Acceptance of the project and as-built drawings are received and approved by the IRHTP. Upon Final Acceptance, the Vendor shall submit an invoice to the IRHTP requesting payment of the remaining 10% of the fee for the project. The invoice shall contain appropriate documentation as necessary to support the fee included on the invoice and shall comply with all applicable rules concerning payment of such fees.

5.1.2.2 Monitoring. The IRHTP shall monitor the Vendor's compliance with the scope of work and deadlines established for the project.

5.1.2.3 Review. Once the IRHTP has verified 100% completion of the project, the IRHTP shall review the Vendor's performance history under the Agreement and shall submit the Vendor's Invoice to USAC for payment of the 10% retainer. The retainer will be paid only upon Final Approval of the project, satisfactory restoral of any infrastructure or landscape disturbed by the cable installation process, site and route cleanup, and receipt of the as-built drawings

5.2 Delay of Payment Due To Vendor's Failure. If the IRHTP in good faith determines that the Vendor has failed to perform or deliver any service or product as required by this Contract, the Vendor shall not be entitled to any compensation under this Contract until such service or product is completed or delivered. In the event of partial performance, the IRHTP may withhold that portion of the Vendor's compensation, which represents payment for the unsatisfactory services.

5.3 The IRHTP shall audit the invoices presented to the IRHTP to ensure that they are proper, current and correct. The Vendor has 30 days from the date of invoice to present and resolve any discrepancies with the IRHTP. The IRHTP shall notify the Vendor of any and all discrepancies that the audit(s) reveals.

SECTION 6. INSURANCE.

6.1 Coverage Requirements. The Vendor, and any subcontractors performing the services required under this Agreement, shall maintain in full force and effect, with insurance companies of recognized responsibility, at its own expense, insurance covering its work during the entire term of this Agreement and any extensions or renewals thereof. The insurance shall be of the type and in the amounts as reasonably required by the IRHTP. The Vendor's insurance shall, among other things, insure against any loss or damage resulting from or related to the Vendor's performance of this Agreement. All such insurance policies should remain in full force and effect for the entire life of this Agreement and shall not be canceled or changed except with the advance written approval of the IRHTP.

6.2 Types of Coverage. Unless otherwise requested by the IRHTP, Vendor shall, at its sole cost, cause to be issued and maintained during the entire term of this Agreement (and any extensions or renewals thereof) the insurance coverage's set forth below, each naming the State of Iowa and the IRHTP additional insured or loss payees, as applicable:

<i>Type</i>	<i>Amount</i>
WORKERS COMPENSATION AND EMPLOYER LIABILITY	As Required By Iowa Law
GENERAL LIABILITY (including contractual liability) written on an occurrence basis	
GENERAL AGGREGATE	\$3 million
PRODUCT LIABILITY	\$1 million
PERSONAL INJURY	\$1 million
COMPREHENSIVE AGGREGATE	\$1 million
EACH OCCURRENCE	\$1 million
Automobile Liability, including any auto, hired autos and non owned autos COMBINED SINGLE LIMIT	\$1 million

6.3 Coverage for HCP Property on ICN Controlled Premises. The policies shall provide coverage for damages to the HCP's property, or on premises under the control of the ICN and/or the State of Iowa.



6.4 Claims Made Coverage. All insurance policies required by this Agreement must provide coverage for all claims arising from activities occurring during the term of the policy regardless of the date the claim is filed or expiration of the policy.

6.5 Notice Regarding Cancellation. Certificates of insurance, which provide that the IRHTP will be notified at least thirty (30) days prior to cancellation of the coverage required by this Agreement must be provided by the Vendor and any subcontractors to the IRHTP at the time of execution of the Agreement or at a time mutually agreeable to the parties.

6.6 No Limitation of Liability. The receipt of insured certificates by the IRHTP does not constitute approval of the coverage contained in the certificates, and the Vendor remains responsible for determining that its insurance coverage meets each and every requirement of this Agreement. Acceptance of the insurance certificates by the IRHTP shall not act to relieve the Vendor of any obligation under this Agreement. Only companies authorized to transact business in the State of Iowa shall issue the insurance policies and certificates required by this Section. It shall be the responsibility of the Vendor to keep the respective insurance policies and coverages current and in force during the life of this Agreement.

6.7 Warranty. The Vendor warrants that it has examined its insurance coverage to determine that the State of Iowa and the IRHTP can be named as additional insured without creating an adverse effect on the Vendor's coverage.

6.8 Waiver of Subrogation Rights. The Vendor shall obtain a waiver of any subrogation rights that any of its insurance carriers might have against State of Iowa and the IRHTP. The waiver of subrogation rights shall be indicated on the certificates of insurance coverage supplied to the IRHTP.

SECTION 7. CONFIDENTIAL INFORMATION.

7.1 During the course of this Agreement each party may disclose, to the other either directly or indirectly, certain data that is proprietary which shall be referred to as "Confidential Information" of the disclosing party and which must remain confidential. Confidential Information may include without limitation, among other things, such items as security information, user information, data, knowledge, trade secrets and other proprietary information, methodologies, developments, software, software documentation, inventions, processes, and other nonpublic information in oral, graphic, written, electronic or machine readable form.

7.2 All written or electronic Confidential Information shall be clearly marked as Confidential Information by the party providing the Confidential Information at the time of disclosure to the other party.

7.3 If the Confidential Information is disclosed orally, and reduced to writing, the receiving party must treat the information as Confidential Information.

7.4 The Vendor shall limit such identification to information it reasonably believes it is entitled to confidential treatment pursuant to FCC, USAC or other applicable law.

7.5 The obligations of this Agreement do not apply to Confidential Information which:

7.5.1 Was rightfully in the possession of the receiving party from a source other than the disclosing party prior to the time of disclosure of the Confidential Information to receiving party.

7.5.2 Was known to the receiving party prior to the disclosure of the Confidential Information from the disclosing party;

7.5.3 Was disclosed to the receiving party without restriction by an independent third party having a legal right to disclose the Confidential Information;

7.5.4 Becomes public knowledge, other than through an act or failure to act by the disclosing Party;

7.5.5 Is publicly available or in the public domain when provided;

7.5.6 Is independently developed by the disclosing party; or



7.5.7 Is disclosed pursuant to law, subpoena or the order of a court or government authority.

7.6 The parties shall have the following duties relating to the Confidential Information:

7.6.1 The Vendor shall designate one individual who shall remain the responsible authority in charge of all data collected, used or disseminated by the Vendor in connection with the performance of this Agreement. The Vendor shall accept responsibility for providing adequate supervision and training to its agents and employees to ensure compliance with the terms of this Agreement. The private and confidential data shall remain the property of the IRHTP at all times.

7.6.2 The Confidential Information of either party shall be held in strict confidence by the receiving party and shall not be disclosed or used by the receiving party without the prior written consent of the disclosing party, except as provided in this Agreement or as may be required by law pursuant to available confidentiality restrictions.

7.6.3 The parties shall use their best efforts to protect the Confidential Information in its possession.

7.6.4 The parties shall restrict disclosure of the Confidential Information solely to those of its employees, agents, consultants and attorneys with a need to know in order to accomplish the purpose of this Agreement.

7.6.5 The parties shall protect the Confidential Information from disclosure to or access by unauthorized persons.

7.6.6 The parties shall use the Confidential Information solely for the purpose of this Agreement and for no other purpose.

7.6.7 The parties shall not duplicate the Confidential Information in any form, except as may be necessary to accomplish the purpose of this Agreement.

7.6.8 The parties shall advise each of its employees, agents, consultants and attorneys who receive the Confidential Information of the obligations of confidentiality and restrictions on the use set forth herein.

7.6.9 The parties shall immediately return the Confidential Information and all copies thereof, to each other upon the earlier of the expiration of the need therefore or the termination of this Agreement in order to accomplish the purpose.

7.7 The provisions of this Agreement shall apply to all Confidential Information disclosed by the parties to each other over the course of this Agreement. The parties' obligations under this provision shall survive termination of this Agreement and shall be perpetual.

7.8 The Vendor shall indemnify the IRHTP for a violation of this Section. The Vendor shall notify the IRHTP prior to the destruction of these materials and shall provide the IRHTP with the opportunity for proper destruction of these materials.

7.9 No Confidential Information will be exported to any country in violation of the United States Export Administration Act and the regulations there under.

SECTION 8. VENDOR WARRANTIES.

8.1 Construction of Warranties Expressed in this Agreement with Warranties Implied by Law. All warranties made by the Vendor in all provisions of this Agreement and the bid proposal by the Vendor, whether or not this Agreement specifically denominates the Vendor's promise as a warranty or whether the warranty is created only by the Vendor's affirmation or promise, or is created by a description of the materials and services to be provided, or by provision of samples to the IRHTP, shall not be construed as limiting or negating any warranty provided by law, including without limitation, warranties which arise through course of



dealing or usage of trade. The warranties expressed in this Agreement are intended to modify the warranties implied by law only to the extent that they expand the warranties applicable to the goods and services provided by the Vendor.

8.2 The Vendor warrants that all the concepts, materials produced, the work product and the information, data, designs, processes, inventions, techniques, devices, and other such intellectual property furnished, used, or relied upon by the Vendor or the IRHTP will not infringe any copyright, patent, trademark, trade dress, or other intellectual property right of the Vendor or others. Any intellectual property provided to the IRHTP pursuant to the terms of this Agreement, shall be wholly original with the Vendor or the Vendor has secured all applicable interests, rights, licenses, permits, or other intellectual property rights in such concepts, materials and work.

8.3 The Vendor represents and warrants that the concepts, materials and the IRHTP's use of same and the exercise by the IRHTP of the rights granted by this Agreement shall not infringe upon any other work, other than material provided by the IRHTP to the Vendor to be used as a basis for such materials, or violate the rights of publicity or privacy of, or constitute a libel or slander against, any person, firm or corporation and that the concepts, materials and works will not infringe upon the copyright, trademark, trade name, literary, dramatic, statutory, common law or any other rights of any person, firm or corporation or other entity.

8.4 The Vendor warrants that all of the services to be performed hereunder will be rendered using sound, professional practices and in a competent and professional manner by knowledgeable, trained and qualified personnel.

8.5 The Vendor warrants that the deliverables under this Agreement will operate in conformance with the terms and conditions of this Agreement.

8.6 The Vendor warrants that it has full authority to enter into this Agreement and that it has not granted and will not grant any right or interest to any person or entity that might derogate, encumber, or interfere with the rights granted to the IRHTP.

8.7 The Vendor warrants that all obligations owed to third parties with respect to the activities contemplated to be undertaken by the Vendor pursuant to this Agreement are or will be fully satisfied by the Vendor so that the IRHTP will not have any obligations with respect thereto.

8.8 The Vendor warrants that it is the owner of or otherwise has the right to use and distribute the software, the materials owned by the Vendor and any other materials, and methodologies used in connection with providing the services contemplated by this Agreement.

8.9 The Vendor expressly warrants to the standards in the industry all aspects of the goods and services provided by it or used by the Vendor and the IRHTP in performance of this Agreement.

8.10 The Vendor unconditionally warrants that all equipment supplied and installed for the purpose of fulfilling its obligations under this Agreement are fit for the purpose intended, that it complies with industry standards and that the equipment is compatible with the State's equipment.

SECTION 9. INDEMNIFICATION BY VENDOR. The Vendor agrees to defend, indemnify and hold the IRHTP, and the State of Iowa, its employees, agents, board members, appointed officials and elected officials, harmless from any and all demands, debts liabilities, damages, loss, claims, suits or actions, settlements, judgments, costs and expenses, including the reasonable value of time expended by the Attorney General's Office, and the costs and expenses and attorney fees of other counsel required to defend the IRHTP or the State of Iowa related to or arising from:

9.1 Any violation or breach of this Agreement including, without limitation, any of the Vendor's representations or warranties; or

9.2 Any acts or omissions, including, without limitation, negligent acts or omissions or willful misconduct of Vendor, its officers, employees, agents, board members, contractors, subcontractors, or counsel employed by Vendor in the performance of this Agreement, or any other reason in connection with the goods and services provided under this Agreement; or



9.3 Claims for any violation of any intellectual property right including but not limited to infringement of patents, trademarks, trade dress, trade secrets, or copyrights arising from the any of the goods or service performed in accordance with this Agreement; or

9.4 The Vendor's performance or attempted performance of this Agreement; or

9.5 Any failure by the Vendor to comply with all local, State and Federal laws and regulations; or

9.6 Any failure by the Vendor to make all reports, payments and withholdings required by Federal and State law with respect to social security, employee income and other taxes, fees or costs required by the Vendor to conduct business in the State of Iowa.

9.7 The Vendor's duty to indemnify as set forth in this Section shall survive the expiration or termination of this Agreement and shall apply to all acts taken in the performance of this Agreement regardless of the date any potential claim is made or discovered by the IRHTP.

SECTION 10. TERMINATION.

10.1 Termination For Lack Of Authority or Funding. Notwithstanding anything in this Agreement to the contrary and subject to the limitations, conditions and procedures set forth below, the IRHTP shall have the right to terminate this Agreement without penalty and without any advance notice as a result of any of the following:

10.1.1 The Legislature or Governor fails, in the sole opinion of the IRHTP, to appropriate funds sufficient to allow the IRHTP, the HCP's, or any state agency or department charged with responsibility to perform any of the IRHTP's obligations under this Agreement, to either meet its obligations under this Agreement or to operate as required to fulfill its obligations under this Agreement; or

10.1.2 If funds are de-appropriated, not allocated or if the funds needed by the IRHTP, in the IRHTP's sole discretion, are insufficient for any other reason; or

10.1.3 If the IRHTP's, or USAC's authorization to conduct its business is withdrawn or there is a material alteration in the programs or any other program the IRHTP administers; or

10.1.4 If the IRHTP's duties are substantially modified.

10.1.5 Written Notice of Cancellation. The IRHTP shall provide Vendor with written notice of cancellation pursuant to this Section.

10.2 Termination for Cause. The IRHTP may terminate this Agreement upon written notice for the substantial breach by Vendor of any material term if such breach is not cured by Vendor within the time period specified in the IRHTP's notice of breach or any subsequent notice or correspondence delivered by the IRHTP to Vendor. If a cure is feasible and an opportunity to cure is provided, the notice shall specify the exact date by which the condition must be cured. Following expiration of the opportunity to cure or notice from the IRHTP, the IRHTP may seek any legal or equitable remedy authorized by this Agreement or by law. Substantial breach events include but are not limited to the following:

10.2.1 Vendor fails to perform as required by this Agreement.

10.2.2 Vendor fails to make substantial and timely progress toward performance or fails to meet any of the material specifications and requirements stated in this Agreement, including without limitation the warranties provided in this Agreement, in the RFP or in the Vendor's bid proposal.

10.3 Termination for Convenience. Following 30 days written notice, the IRHTP may terminate this Agreement in whole or in part for convenience without the payment of any penalty or incurring any further obligation to the Vendor. Termination for Convenience can be for any reason or no reason at all if it is in the best interests of the IRHTP.



10.4 Immediate Termination. The IRHTP may terminate this Agreement effective immediately without advance notice and without penalty for any of the following reasons:

10.4.1 Vendor furnished any statement, representation, warranty or certification in connection with this Agreement, which is materially false, deceptive, incorrect or incomplete.

10.4.2 Vendor fails to perform, to the IRHTP's satisfaction, any material requirement of this Agreement or is in violation of any material provision of this Agreement, including, without limitation, the express warranties made by the Vendor.

10.4.3 The IRHTP determines that satisfactory performance of this Agreement is substantially endangered or that a default is likely to occur.

10.4.4 Vendor becomes subject to any bankruptcy or insolvency proceeding under Federal or State law to the extent allowed by applicable Federal or State law including bankruptcy laws.

10.4.5 Vendor terminates or suspends its business.

10.4.6 The IRHTP reasonably believes that Vendor has become insolvent or unable to pay its obligations as they accrue consistent with applicable Federal or State law.

10.4.7 It is alleged that Vendor's processes or materials violate any valid patent, trademark, copyright, other intellectual property right or contract, and the IRHTP reasonably believes that the allegation may impair Vendor's performance of this Agreement.

10.4.8 Vendor has failed to comply with all applicable Federal, State, and local laws, rules, ordinances, regulations and orders when performing within the scope of this Agreement.

10.4.9 Vendor has engaged in conduct that has or may expose the IRHTP to liability, as determined in the IRHTP's sole discretion.

10.4.10 Vendor has a conflict of interest that interferes with fair competition or conflicts with an interest of the IRHTP as determined in the IRHTP's sole discretion.

10.5 In the event of termination of this Agreement for any reason by USAC or the IRHTP, USAC and the IRHTP shall pay only the amounts, if any, due and owing to Vendor for services actually rendered up to and including the date of termination of the Agreement and for which the USAC and the IRHTP is obligated to pay pursuant to this Agreement. Payment will be made only upon submission of invoices and proper proof of Vendor's claim. This provision in no way limits the remedies available to USAC or the IRHTP in the event of a termination under this provision. However, the USAC or the IRHTP shall not be liable for any of the following costs:

10.5.1 The payment of Unemployment Compensation to Vendor's employees;

10.5.2 The payment of Workers' Compensation claims which occur during the Agreement or extend beyond the date on which the Agreement terminates.

10.5.3 Any costs incurred by Vendor in its performance of the Agreement including but not limited to startup costs, overhead or other costs associated with the performance of the Agreement.

10.5.4 Any taxes that may be owed by Vendor for the performance of this Agreement including but not limited to sales taxes, excise taxes, use taxes, income taxes or property.

10.6 Vendor Obligations upon Termination. Upon expiration or termination of this Agreement, or upon request of the IRHTP, the Vendor shall:

10.6.1 Immediately cease using and return to the IRHTP any personal property or material, whether tangible or intangible, provided by the IRHTP to the Vendor and in its, or any subcontractor's, control or possession;

10.6.2 Upon request from the IRHTP, destroy any personal property or material, whether tangible or intangible at no additional cost to the IRHTP, and verify in writing that the designated property or material has been destroyed;

10.6.3 Comply with the IRHTP's instructions for the timely transfer of active files and work being performed by Vendor under this Agreement to the IRHTP or the IRHTP's designee;

10.6.4 Protect and preserve property in the possession of the Vendor in which the IRHTP has an interest;

10.6.5 Stop work under this Agreement on the date specified in any notice of termination provided by the IRHTP;

10.6.6 Cooperate in good faith with the IRHTP, its employees, agents and contractors during the transition period between the notification of termination and the substitution of any replacement Vendor.

10.7 Care of Property. The Vendor shall be responsible for the proper custody and care of any of the HCP or State owned tangible personal property furnished for the Vendor's use in connection with the performance of the Agreement, and the Vendor will reimburse the IRHTP or the State for such property's loss or damage caused by the Vendor, normal wear and tear excepted.

10.8 Reduction of Resources. If, during the Term, the IRHTP experiences a change in the scope, nature or volume of its business, or if the IRHTP elects to change the manner or method by which it does business (including, but not limited to, an election by Iowa Legislature to effect a sale or other disposition of material assets), which have or may have the effect of causing a decrease in the quantity or quality of the Services that will be needed by IRHTP, then IRHTP may request Vendor to reduce the level of Services and the annual Service charges to IRHTP under this Agreement. However any such reduction must not adversely impact upon Vendor's ability to reasonably perform its obligations under the Agreement.

SECTION 11. CONTRACT ADMINISTRATION.

11.1 Independent Contractor. The status of the Vendor shall be that of an independent contractor. The Vendor, its employees, agents and any subcontractors performing under this Agreement are not employees or agents of IHA. Neither the Vendor nor its employees shall be considered employees of IHA or IRHTP for Federal or State tax purposes. IHA and IRHTP will not withhold taxes on behalf of the Vendor (unless required by law).

11.2 Compliance with the Law and Regulations.

11.2.1 Compliance with the Law and Regulations. Vendor shall comply with all applicable Federal, State, and local laws, rules, ordinances, regulations and orders when performing within the scope of this Agreement, including, without limitation, all laws applicable to the prevention of discrimination in employment, the administrative rules of the Iowa Department of Management or the Iowa Civil Rights Commission which pertain to equal employment opportunity and affirmative action, laws relating to prevailing wages, occupational safety and health standards, prevention of discrimination in employment, payment of taxes, gift laws, lobbying laws and laws relating the use of targeted small businesses as subcontractors or suppliers.

11.2.2 The Vendor declares that it has complied with all Federal, State and local laws regarding business permits and licenses that may be required to carry out the work to be performed under this Agreement, including, without limitation, laws governing State of Iowa procurement and contracting.

11.2.3 The Vendor shall give notice to any labor union with which it has a bargaining or other agreement of its commitment under this section of the Agreement. The Vendor shall make the provisions of this Section a part of its contracts with any subcontractors providing goods or services related to the fulfillment of this Agreement.

11.2.4 The Vendor shall comply with all of the reporting and compliance standards regarding equal employment.

11.2.5 The Vendor may be required to submit its affirmative action plan

11.2.6 The IRHTP may consider the failure of the Vendor to comply with any law or regulation as a material breach of this Agreement. In addition, the Vendor may be declared ineligible for future USAC contracts or be subjected to other sanctions for failure to comply with this Section.

11.3 Amendments. This Agreement may be amended in writing from time to time by mutual consent of the parties. All amendments to this Agreement must be fully executed by the parties.

11.4 Third Party Beneficiaries. There are no third party beneficiaries to this Agreement. This Agreement is intended only to benefit IRHTP and the Vendor.

11.5 Choice of Law and Forum.

11.5.1 The laws of the State of Iowa shall govern and determine all matters arising out of or in connection with this Agreement without regard to the choice of law provisions of Iowa law.

11.5.2 In the event any proceeding of a quasi-judicial or judicial nature is commenced in connection with this Agreement, the exclusive jurisdiction for the proceeding shall be brought in Polk County District Court for the State of Iowa, Des Moines, Iowa, or in the United States District Court for the Southern District of Iowa, Central Division, Des Moines, Iowa wherever jurisdiction is appropriate.

11.5.3 This provision shall not be construed as waiving any immunity to suit or liability including, without limitation, sovereign immunity in State or Federal court, which may be available to the IRHTP or the State of Iowa.

11.6 Integration. This Agreement, including all the documents incorporated by reference, represents the entire Agreement between the parties and neither party is relying on any representation that may have been made which is not included in this Agreement. The parties agree that if a Schedule, Addendum, Rider or Exhibit or other document is attached hereto by the parties, and referred to herein, then the same shall be deemed incorporated herein by reference.

11.7 Not a Joint Venture. Nothing in this Agreement shall be construed as creating or constituting the relationship of a partnership, joint venture, (or other association of any kind or agent/principal relationship) between the parties hereto. No party, unless otherwise specifically provided for herein, has the authority to enter into any agreement or create an obligation or liability on behalf of, in the name of, or binding upon another party to this Agreement.

11.8 Consent to Service. The Vendor irrevocably consents to service of process by certified or registered mail addressed to the Vendor's designated agent. The Vendor appoints _____ at _____ as its agent to receive service of process. If for any reason the Vendor's agent for service is unable to act as such or the address of the agent changes, the Vendor shall immediately appoint a new agent and provide the IRHTP with written notice of the change in agent or address. Any change in the appointment of the agent or address will be effective only upon actual receipt by the IRHTP. Nothing in this provision will alter the right of the IRHTP to serve process in another manner permitted by law.

11.9 Supersedes Former Agreements. This Agreement supersedes all prior Agreements between the IRHTP and the Vendor for the services provided in connection with this Agreement.



11.10 Waiver. Any breach or default by either party shall not be waived or released other than in writing or by a written notice signed by the other party. Failure by either party at any time to require performance by the other party or to claim a breach of any provision of the Agreement shall not be construed as affecting any subsequent breach or the right to require performance with respect thereto or to claim a breach with respect thereto.

11.11 Notices.

11.11.1 Any and all notices, designations, consents, offers, acceptances or any other communication provided for herein shall be given in writing by registered or certified mail, return receipt requested, by receipted hand delivery, by Federal Express, courier or other similar and reliable carrier which shall be addressed to each party as set forth as follows:

If to the IRHTP:

Mr. Art Spies
Iowa Hospital Association
100 East Grand Ave – Suite 100
Des Moines, Iowa 50309

If to the Vendor:

[Vendor may provide one (1) contact]

11.11.2 Each such notice shall be deemed to have been provided:

11.11.2.1 At the time it is actually received; or,

11.11.2.2 Within one day in the case of overnight hand delivery, courier or services such as Federal Express with guaranteed next day of delivery; or,

11.11.2.3 Within five days after deposited the U.S. Mail in the case of registered U.S. Mail.

11.11.3 Copies of such notice to each party shall be provided separately.

11.11.4 From time to time, the parties may change the name and address of a party designated to receive notice. Such change of the designated person shall be in writing to the other party and as provided herein.

11.12 Cumulative Rights. The various rights, powers, options, elections and remedies of either party, provided in this Agreement, shall be construed as cumulative and no one of them is exclusive of the others or exclusive of any rights, remedies or priorities allowed either party by law. Nothing in this Agreement shall be construed as affecting, impairing or limiting the equitable or legal remedies to which either party may be entitled as a result of any breach of this Agreement.

11.13 Severability. If any provision of this Agreement is determined by a court of competent jurisdiction to be invalid or unenforceable, the invalid portion shall be severed from this Agreement. Such a determination shall not affect the validity or enforceability of any other part or provision of this Agreement.

11.14 Express Warranties. The Vendor expressly warrants all aspects of the items and services provided by it or used by the Vendor and the IRHTP in performance of this Agreement.

11.15 Warranty Regarding Solicitation. The Vendor warrants that no person or selling agency has been employed or retained to solicit and secure this Agreement upon an agreement or understanding for commission, percentage, brokerage or contingency except bona fide employees or selling agents maintained for the purpose of securing business.



11.16 Obligations of Joint Entities. If the Vendor is a joint entity consisting of more than one individual, partnership, corporation or other business organization, all such entities shall be jointly and severally liable for carrying out the Agreement activities.

11.17 Obligations Beyond Agreement Term. This Agreement shall remain in full force and effect to the end of the specified term or until terminated or canceled pursuant to this Agreement. All obligations of the Vendor incurred or existing under this Agreement as of the date of expiration, termination or cancellation will survive the expiration, termination or cancellation of this Agreement.

11.18 Time is of the Essence. Time is of the essence with respect to the successful performance of the terms of this Agreement. The Vendor shall ensure that all personnel providing services to the IRHTP are responsive to the IRHTP's requirements in all respects.

11.19 Authorization. Each party to this Agreement represents and warrants to the other that it has the right, power and authority to enter into and perform its obligations under this Agreement and that it has taken all requisite action (corporate, statutory, or otherwise) to approve execution, delivery and performance of this Agreement. This Agreement constitutes a legal, valid and binding obligation upon the parties in accordance with its terms.

11.20 Successors in Interest. All the terms, provisions, and conditions of the Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors, assigns, and legal representatives.

11.21 Counterparts and Facsimile Signatures. The parties agree that this Agreement has been or may be executed in several counterparts, each of which shall be deemed an original and all such counterparts shall together constitute one and the same instrument. The parties further agree that the signatures on this Agreement or any amendment or schedule may be manual, scanned, or a facsimile signature of the person authorized to sign the appropriate document. All authorized scanned or facsimile signatures shall have the same force and effect as if manually signed.

11.22 Additional Provisions. The parties agree that if a Schedule, Addendum, Rider or Exhibit is attached hereto by the parties, and referred to herein, then the same shall be deemed incorporated herein by reference.

11.23 Use of Third Parties/Prime Vendor Responsibilities. The IRHTP acknowledges that the Vendor may contract with third parties for the performance of any of the Vendor's obligations under this Agreement. All subcontracts shall be subject to advance written approval by the IRHTP. The Vendor may enter into these contracts to complete the project provided that the Vendor remains responsible for all services performed under this Agreement. All restrictions, obligations and responsibilities of the Vendor under this Agreement shall also apply to subcontractors. The IRHTP shall consider the Vendor to be the sole point of contact with regard to all matters related to this Agreement and is not required to initiate or maintain contact with any subcontractor. IRHTP may choose to deny use of any specific third party contractor at IRHTP's sole discretion, in which case the Vendor must obtain a different third party contractor.

11.24 Data Processing Warranty.

11.24.1 The Vendor warrants that each item of hardware, software, firmware, or a custom designed and developed software program or a system which is developed or delivered under, or used by Vendor in connection with its performance of this Agreement, shall accurately process data, including, but not limited to, calculating, comparing and sequencing, from, into, between and among the nineteenth, twentieth and twenty-first centuries, including leap year calculations, when used in accordance with the item(s) documentation provided by the Vendor.

11.24.2 If the items to be developed and delivered under this Agreement are to perform as a system with other hardware and/or software, then the warranty shall apply to the items developed and delivered as the items process, transfer, sequence data, or otherwise interact with other components or parts of the system. This warranty shall survive the term of this Agreement. The remedies available to the IRHTP for a breach of warranty includes, but is not limited to, repair or replacement of non-compliant items or systems.

11.24.3 Nothing in this warranty shall be construed to limit any rights or remedies of the IRHTP under this Agreement with respect to defects in the items other than the Data Processing Warranty.

11.25 Force Majeure. Neither Vendor nor the IRHTP shall be liable to the other for any delay or failure of performance of this Agreement; and no delay or failure of performance shall constitute a default or give rise to any liability for damages if, and only to the extent that, such delay or failure is caused by a "force majeure".

11.25.1 As used in this Agreement, "force majeure" includes acts of God, war, civil disturbance and any other causes which are beyond the control and anticipation of the party effected and which, by the exercise of reasonable diligence, the party was unable to anticipate or prevent. Failure to perform by a subcontractor or an agent of the Vendor shall not be considered a "force majeure" unless the subcontractor or supplier is prevented from timely performance by a "force majeure" as defined in this Agreement. "Force majeure" does not include: financial difficulties of the Vendor or any parent, subsidiary, affiliated or associated company of Vendor; claims or court orders which restrict Vendor's ability to deliver the goods or services contemplated by this Agreement.

11.25.2 If a "force majeure" delays or prevents Vendor's performance, the Vendor shall immediately commence to use its best efforts to directly provide alternate, and to the extent possible, comparable performance. Comparability of performance and the possibility of comparable performance shall be reasonably determined solely by the IRHTP.

11.25.3 During any such period, the Vendor shall continue to be responsible for all costs and expenses related to alternative performance.

11.25.4 This Section shall not be construed as relieving the Vendor of its responsibility for any obligation which is being performed by a subcontractor or supplier of services unless the subcontractor or supplier is prevented from timely performance by a "force majeure" as described here.

11.26 Records Retention and Access. The Vendor shall permit the Auditor of the State of Iowa or any authorized representative of the State or any authorized representative of the United States government, or USAC, to access and examine, audit, excerpt and transcribe any directly pertinent validation records, financial records, accounting records, books, documents, papers, electronic or optically stored and created records or other records of the Vendor relating to or created as a result of the performance of this Agreement. These records shall be made available to the State, its designees, the Auditor, or an authorized representative of the United States government, or USAC, at reasonable times and at no cost to the requesting organization during the term of this Agreement and for a period of at least (5) years following the termination, cancellation or expiration of this Agreement.

11.27 Taxes. IRHTP declares and Vendor acknowledges that the Vendor and its subcontractors may be subject to certain taxes including but not limited to sales tax, motor vehicle fuel tax, personal or corporate income tax or other taxes or assessments, and to licensing fees or other miscellaneous fees or charges which may be imposed by Federal, State or local law or ordinance. The Vendor and its subcontractors shall be solely responsible for the payment of such taxes. The Vendor shall promptly pay all such taxes, fees or charges when due. IRHTP is a tax-exempt entity and the Vendor shall not attempt to pass on any costs, including surcharges and fees, to the IRHTP that are attributable to federal, state, or local taxes, including sales tax, motor fuel tax, property tax, or personal or corporate income tax.

11.28 Further Assurances and Corrective Instruments. The Vendor agrees that it will, from time to time, execute, acknowledge and deliver, or cause to be executed, acknowledged and delivered, such supplements hereto and such further instruments as may reasonably be required for carrying out the expressed intention of this Agreement.

11.29 Assignment and Delegation. This Agreement may not be assigned, transferred or conveyed in whole or in part without the prior written consent of the other party. For purposes of construing this clause, a transfer of a controlling interest in Vendor shall be considered an assignment. If the State, in its sole

discretion, determines that the Vendor's assignment of this Agreement to another person or entity is not in the State's best interests, the State may elect to terminate this Agreement with the Vendor without penalty upon thirty (30) days written notice to the Vendor.

11.30 Headings or Captions. The paragraph headings or captions are for identification purposes only and do not limit or construe the contents of the paragraphs.

SECTION 12. BUSINESS DOWNTURN.

12.1 In the event of a business downturn or budget difficulties beyond the control of the IRHTP, including budget difficulties of other HCP's or the IRHTP or significant restructuring or reorganization, any of which significantly reduces the volume of OSP plant required by the IRHTP, with the result that IRHTP will be unable to meet its revenue or volume commitments under this Agreement, Vendor and the IRHTP will cooperate in efforts to develop a mutually agreeable alternative.

SECTION 13. REDUCTION OF RESOURCES.

13.1 If, during the Term, the IRHTP or the HCP's experience a change in the scope, nature or volume of its business, or if the IRHTP elects to change the manner or method by which it does business, the Vendor will be asked to reduce the level of Services to IRHTP under this Agreement. However any such reduction must not adversely impact upon Vendor's ability to reasonably perform its obligations under the Agreement.

13.2 In such event, Vendor shall estimate, in writing and in good faith, the aggregate decreased charges to Vendor from IRHTP's ceasing to perform such Services and shall provide such written estimate to IRHTP, no later than 30 days from Vendor's receipt of IRHTP's notice. IRHTP, upon receipt of such estimate, may then elect by written notice given to Vendor within 15 days following receipt of Vendor's written estimate to:

13.3 Withdraw its request for a cessation of part of the Services;

13.4 Implement such partial cessation of Services based upon the estimate of Vendor; or

13.5 Request that Vendor negotiate with IRHTP regarding the aggregate reduction in the Contract Services due to Vendor from IRHTP hereunder as a result of the partial cessation of Services. If IRHTP shall elect to request Vendor to negotiate, the parties shall promptly negotiate in good faith regarding the amount.

SECTION 14. EXECUTION.

IN WITNESS WHEREOF, in consideration of the mutual covenants set forth above and for other good and valuable consideration, the receipt, adequacy and legal sufficiency of which are hereby acknowledged, the parties have entered into the above Agreement and have caused their duly authorized representatives to execute this Agreement.

IOWA HOSPITAL ASSOCIATION ON BEHALF OF IRHTP

By:

Date: _____

Name: Mr. Art Spies

Title: Project Coordinator - IRHTP

(Vendor Name to be placed HERE)

By:

Date: _____

Name:

Title:



ATTACHMENT 1 – PART II
QUALITY ASSURANCE INSPECTION SERVICES
CONTRACTUAL TERMS AND CONDITIONS
RFP 08-001

SECTION 1. TERM. This Agreement is effective [EFFECTIVE DATE WILL BE LISTED], and will continue through (project completion).

SECTION 2. DOCUMENTS INCORPORATED BY REFERENCE.

2.1 Incorporation of Bid Proposal Documents. The IRHTP RFP 08-001 and the Vendor's bid proposal in response to this RFP, together with any clarifications, attachments, appendices, amendments or other writings of the IRHTP or the Vendor (collectively bid proposal) are incorporated into this Agreement by this reference as if fully set forth in this Agreement.

2.2 Contractual Obligations of Vendor. The terms and conditions of the bid proposal and of the RFP are made contractual obligations of the Vendor.

2.3 Contents of Agreement. The parties acknowledge that this Agreement consists of this document as well as the RFP and the bid proposal and that the parties are obligated to perform as set forth in the RFP and the bid proposal to the same extent that they are obligated to perform the specific duties set forth in this document.

2.3.1 Order of Preference. In the case of any inconsistency or conflict between the specific provisions of this document, the RFP or the bid proposal, any inconsistency or conflict shall be resolved as follows:

2.3.5 First, by giving preference to the specific provisions of this Agreement.

2.3.6 Second, by giving preference to the specific provisions of the RFP.

2.3.7 Third, by giving preference to the specific provisions of the bid proposal.

2.4 Intent of References to Bid Documents. The references to the parties' obligations, which are contained in this document, are intended to change, supplement or clarify the obligations as stated in the RFP and the bid proposal. The failure of the parties to make reference to the terms of the RFP or bid proposal in this document shall not be construed as creating a conflict and will not relieve the Vendor of the contractual obligations imposed by the terms of the RFP and the bid proposal. Terms offered in the bid proposal, which exceed the requirements of the RFP, shall not be construed as creating an inconsistency or conflict with the RFP or this document. The contractual obligations of the IRHTP cannot be implied from the bid proposal.

SECTION 3. DEFINITIONS. The following words shall have the meanings set forth below. Words in the singular shall be held to include the plural and vice versa, and words of gender shall be held to include the other gender as the context requires. For the purposes of this Contract, the following terms and all other terms defined in this Contract shall have the meanings so defined unless the context clearly indicates otherwise.

3.1 "IHA" shall mean the Iowa Hospital Association

3.2 "IRHTP" shall mean the Iowa Rural Health Telecommunications Program

3.3 "Vendor" shall mean [Vendor will be listed].

SECTION 4. SCOPE OF WORK

4.1 Vendor shall provide the IRHTP Quality Assurance Inspection Services on an "as needed" basis, determined by the IRHTP, and shall work with the IRHTP Project Coordinator, Staff, and key managers.



4.2 The following is a list of the abilities, knowledge, services and/or support items the Vendor shall provide on an “as needed” basis, upon request of the IRHTP. All services shall be coordinated by Mr. Art Spies, (515) 288-1955 and spiesa@ihaonline.org.

4.2.1 (VENDOR) Quality Assurance General Requirements:

- 4.2.1.1 Shall be able to begin work immediately upon contract signature.
- 4.2.1.2 Work shall be completed within individual project guidelines as assigned.
- 4.2.1.3 Shall have a minimum of 5 years buried outside plant project experience, in telecommunications & technology.
- 4.2.1.4 Shall possess excellent customer services skills – able to communicate effectively.
- 4.2.1.5 Shall possess superior soft skills including the ability to work with clients, negotiate requirements between stake holders, work on a team, lead and facilitate meetings, and the ability to adapt to existing processes.
- 4.2.1.6 Shall complete assignments in a timely manner and submit weekly status reports indicating progress on assigned tasks, meet assigned project due dates, and identify and suggest resolutions for issues having a potential to adversely impact performance and/or the project.
- 4.2.1.7 Shall maintain a positive working relationship with coworkers, supervisors, and management, as well as present a positive team-oriented attitude and customer focus.
- 4.2.1.8 Shall adhere to IRHTP work rules and processes.
- 4.2.1.9 Shall produce written and verbal English language instructions.
- 4.2.1.10 Shall understand written and verbal English language, presentation materials, documentation, requirement statements, problem descriptions and other forms of communication for interaction with team members and managers.
- 4.2.1.11 Shall have knowledge of the current IRHTP Network design and/or similar or comparable networks.

4.2.2 (VENDOR) Quality Assurance Required Skill Sets:

- 4.2.2.1 Shall have an extensive knowledge of buried fiber optic networks.
- 4.2.2.2 Shall be able to coordinate personnel from various external groups to facilitate projects to successful completion.
- 4.2.2.3 Shall have a detailed understanding of the construction of each link-segment he is overseeing.

4.2.3 (VENDOR) Quality Assurance Tasks: (in no particular order)

- 4.2.3.1 Vendor is responsible to ensure all construction specifications outlined are continually followed and fully met by construction contractors. If it is determined at any time that construction practices are sub-standard, this shall be considered grounds for (VENDOR) contract termination, reduced compensation and/or other remedies available as described in the contract
- 4.2.3.2 This Contract will allow the (Vendor) to utilize the Quality Assurance Services (VENDOR) agrees to provide. The IRHTP shall have full approval of any personnel and/or services that (VENDOR) provides to the IRHTP.

4.2.3.3 Any or all services provided by (VENDOR) and/or their personnel shall become the property of the IRHTP. (VENDOR) shall not retain any rights to or copies of the works made for hire. All products, processes, items, programs, code, etc. and any and all other IRHTP items assisted by (VENDOR) personnel as part of this contract shall belong to and are the property of the IRHTP. (VENDOR) agrees that no item produced under this contract shall be retained by (VENDOR) and all computerized, paper copy, graphics file, or record in any format whatsoever of all items created under this contract shall NOT BE retained by (VENDOR) once the task or project is complete. All material must be turned over to IRHTP at end of project.

4.2.3.4 Following five (5) days written notice, the IRHTP may terminate this Agreement in whole or in part for convenience without the payment of any penalty or incurring any further obligation to Vendor. Termination for Convenience can be for any reason or no reason at all if it is in the best interests of the IRHTP. If contract is terminated prior to contract conclusion all items created up to termination date under this contract as denoted in the above paragraph shall be given to IRHTP and (VENDOR) shall certify that (VENDOR) or any of its employees has retained no item.

4.2.4 This contract may be amended in whole or in part by mutual agreement of both parties.

SECTION 5. COMPENSATION.

5.1 Payment Terms – Progress Payments

5.1.1 USAC and IRHTP will disburse funds based on monthly submissions (*i.e.*, invoices) of actual incurred eligible expenses, and will respond to vendor invoices in accordance with its current bi-monthly invoicing payment plan. This invoice process will permit disbursement of funds to ensure that the selected Participants' network projects proceed, while allowing USAC and the FCC to monitor expenditures in order to ensure compliance with the program and prevent waste, fraud, and abuse.

5.1.2 Upon award of contract for a link-segment, the Vendor will assist the IRHTP project coordinator in the development of a USAC Network Cost Worksheet. (NCW) This work sheet will list the primary tasks to be completed for each link-segment. When specific line items are completed on each NCW, the Vendor may submit it for a progress payment. As soon as the line item completion is approved by the IRHTP project coordinator the vendor will be paid 15% of the line item amount by the specific HCP served by the link-segment. The Vendor will acknowledge receipt of the 15% payment and forward appropriate forms to USAC for payment of the remaining 85%. USAC will honor requests for payment twice each month.

The invoices when submitted must certify by signature that all construction specifications were met during the covered period on the specified segment and show the contract number and project/site number on each invoice. If the IRHTP disputes the amount of any invoice, the IRHTP will notify the Vendor of the dispute within 10 days of receipt of the invoice. IRHTP may withhold payment of the disputed amount until the dispute is resolved.

5.1.2.1 Retainer - Payment tied to Performance. The IRHTP shall withhold 10% of the fee for the project until the IRHTP has provided Final Acceptance of the project and all reports are received and approved by the IRHTP. Upon Final Acceptance, the Vendor shall submit an invoice to the IRHTP requesting payment of the remaining 10% of the fee for the project. The invoice shall contain appropriate documentation as necessary to support the fee included on the invoice and shall comply with all applicable rules concerning payment of such fees.

5.1.2.2 Monitoring. The IRHTP shall monitor the Vendor's compliance with the scope of work and deadlines established for the project.

5.1.2.3 Review. Once the IRHTP has verified 100% completion of the project, the IRHTP shall review the Vendor's performance history under the Agreement and shall submit the Vendor's Invoice to USAC for payment of the 10% retainer. The retainer will be paid only upon Final Approval of the project, satisfactory restoral of any infrastructure or landscape disturbed by the cable installation process, site and route cleanup, and receipt of the as-built drawings.



5.2 Delay of Payment Due To Vendor's Failure. If the IRHTP in good faith determines that the Vendor has failed to perform or deliver any service or product as required by this Contract, the Vendor shall not be entitled to any compensation under this Contract until such service or product is completed or delivered. In the event of partial performance, the IRHTP may withhold that portion of the Vendor's compensation, which represents payment for the unsatisfactory services.

5.3 The IRHTP shall audit the invoices presented to the IRHTP to ensure that they are proper, current and correct. The Vendor has 30 days from the date of invoice to present and resolve any discrepancies with the IRHTP. The IRHTP shall notify the Vendor of any and all discrepancies that the audit(s) reveals.

SECTION 6. INSURANCE.

6.1 Coverage Requirements. The Vendor, and any subcontractors performing the services required under this Agreement, shall maintain in full force and effect, with insurance companies of recognized responsibility, at its own expense, insurance covering its work during the entire term of this Agreement and any extensions or renewals thereof. The insurance shall be of the type and in the amounts as reasonably required by the IRHTP. The Vendor's insurance shall, among other things, insure against any loss or damage resulting from or related to the Vendor's performance of this Agreement. All such insurance policies should remain in full force and effect for the entire life of this Agreement and shall not be canceled or changed except with the advance written approval of the IRHTP.

6.2 Types of Coverage. Unless otherwise requested by the IRHTP, Vendor shall, at its sole cost, cause to be issued and maintained during the entire term of this Agreement (and any extensions or renewals thereof) the insurance coverage's set forth below, each naming the State of Iowa and the IRHTP additional insured or loss payees, as applicable:

<i>Type</i>	<i>Amount</i>
Workers Compensation and Employer Liability	As Required By Iowa Law
General Liability (including contractual liability) written on an occurrence basis	
GENERAL AGGREGATE	\$3 million
PRODUCT LIABILITY	\$1 million
PERSONAL INJURY	\$1 million
COMPREHENSIVE AGGREGATE	\$1 million
EACH OCCURRENCE	\$1 million
Automobile Liability, including any auto, hired autos and non owned autos	\$1 million
COMBINED SINGLE LIMIT	
Errors and Omissions liability insurance	\$500,000

6.3 Coverage for HCP Property on ICN Controlled Premises. The policies shall provide coverage for damages to the HCP's property, or on premises under the control of the ICN and/or the State of Iowa.

6.4 Errors and Omissions Insurance. Prior to signing contract, the Vendor awarded the contract for Chapter 3 Part II will be required to procure "Errors and Omissions" liability insurance in the amount of not less than \$500,000, naming the IRHTP as one of the additional insured or loss payees.

6.4.1 A Performance Bond may be filed with the IRHTP in lieu of an "Errors and Omissions" Insurance policy as long as it names the IRHTP as one of the additional insured or loss payees.

6.4.2 No Bid Bond is required.



6.4.3 No Litigation Bond is required

6.5 Claims Made Coverage. All insurance policies required by this Agreement must provide coverage for all claims arising from activities occurring during the term of the policy regardless of the date the claim is filed or expiration of the policy.

6.6 Notice Regarding Cancellation. Certificates of insurance, which provide that the IRHTP will be notified at least thirty (30) days prior to cancellation of the coverage required by this Agreement must be provided by the Vendor and any subcontractors to the IRHTP at the time of execution of the Agreement or at a time mutually agreeable to the parties.

6.7 No Limitation of Liability. The receipt of insured certificates by the IRHTP does not constitute approval of the coverage contained in the certificates, and the Vendor remains responsible for determining that its insurance coverage meets each and every requirement of this Agreement. Acceptance of the insurance certificates by the IRHTP shall not act to relieve the Vendor of any obligation under this Agreement. Only companies authorized to transact business in the State of Iowa shall issue the insurance policies and certificates required by this Section. It shall be the responsibility of the Vendor to keep the respective insurance policies and coverages current and in force during the life of this Agreement.

6.8 Warranty. The Vendor warrants that it has examined its insurance coverage to determine that the State of Iowa and the IRHTP can be named as additional insured without creating an adverse effect on the Vendor's coverage.

6.9 Waiver of Subrogation Rights. The Vendor shall obtain a waiver of any subrogation rights that any of its insurance carriers might have against State of Iowa and the IRHTP. The waiver of subrogation rights shall be indicated on the certificates of insurance coverage supplied to the IRHTP.

SECTION 7. CONFIDENTIAL INFORMATION.

7.1 During the course of this Agreement each party may disclose, to the other either directly or indirectly, certain data that is proprietary which shall be referred to as "Confidential Information" of the disclosing party and which must remain confidential. Confidential Information may include without limitation, among other things, such items as security information, user information, data, knowledge, trade secrets and other proprietary information, methodologies, developments, software, software documentation, inventions, processes, and other nonpublic information in oral, graphic, written, electronic or machine readable form.

7.2 All written or electronic Confidential Information shall be clearly marked as Confidential Information by the party providing the Confidential Information at the time of disclosure to the other party.

7.3 If the Confidential Information is disclosed orally, and reduced to writing, the receiving party must treat the information as Confidential Information.

7.4 The Vendor shall limit such identification to information it reasonably believes it is entitled to confidential treatment pursuant to FCC, USAC or other applicable law.

7.5 The obligations of this Agreement do not apply to Confidential Information which:

7.5.1 Was rightfully in the possession of the receiving party from a source other than the disclosing party prior to the time of disclosure of the Confidential Information to receiving party.

7.5.2 Was known to the receiving party prior to the disclosure of the Confidential Information from the disclosing party;

7.5.3 Was disclosed to the receiving party without restriction by an independent third party having a legal right to disclose the Confidential Information;

7.5.4 Becomes public knowledge, other than through an act or failure to act by the disclosing party;

7.5.5 Is publicly available or in the public domain when provided;



7.5.6 Is independently developed by the disclosing party; or

7.5.7 Is disclosed pursuant to law, subpoena or the order of a court or government authority.

7.6 The parties shall have the following duties relating to the Confidential Information:

7.6.1 The Vendor shall designate one individual who shall remain the responsible authority in charge of all data collected, used or disseminated by the Vendor in connection with the performance of this Agreement. The Vendor shall accept responsibility for providing adequate supervision and training to its agents and employees to ensure compliance with the terms of this Agreement. The private and confidential data shall remain the property of the IRHTP at all times.

7.6.2 The Confidential Information of either party shall be held in strict confidence by the receiving party and shall not be disclosed or used by the receiving party without the prior written consent of the disclosing party, except as provided in this Agreement or as may be required by law pursuant to available confidentiality restrictions.

7.6.3 The parties shall use their best efforts to protect the Confidential Information in its possession.

7.6.4 The parties shall restrict disclosure of the Confidential Information solely to those of its employees, agents, consultants and attorneys with a need to know in order to accomplish the purpose of this Agreement.

7.6.5 The parties shall protect the Confidential Information from disclosure to or access by unauthorized persons.

7.6.6 The parties shall use the Confidential Information solely for the purpose of this Agreement and for no other purpose.

7.6.7 The parties shall not duplicate the Confidential Information in any form, except as may be necessary to accomplish the purpose of this Agreement.

7.6.8 The parties shall advise each of its employees, agents, consultants and attorneys who receive the Confidential Information of the obligations of confidentiality and restrictions on the use set forth herein.

7.6.9 The parties shall immediately return the Confidential Information and all copies thereof, to each other upon the earlier of the expiration of the need therefore or the termination of this Agreement in order to accomplish the purpose.

7.7 The provisions of this Agreement shall apply to all Confidential Information disclosed by the parties to each other over the course of this Agreement. The parties' obligations under this provision shall survive termination of this Agreement and shall be perpetual.

7.8 The Vendor shall indemnify the IRHTP for a violation of this Section. The Vendor shall notify the IRHTP prior to the destruction of these materials and shall provide the IRHTP with the opportunity for proper destruction of these materials.

7.9 No Confidential Information will be exported to any country in violation of the United States Export Administration Act and the regulations there under.

SECTION 8. VENDOR WARRANTIES.

8.1 Construction of Warranties Expressed in this Agreement with Warranties Implied by Law. All warranties made by the Vendor in all provisions of this Agreement and the bid proposal by the Vendor, whether or not this Agreement specifically denominates the Vendor's promise as a warranty or whether the warranty is created only by the Vendor's affirmation or promise, or is created by a description of the materials and services to be provided, or by provision of samples to the IRHTP, shall not be construed as limiting or negating any warranty provided by law, including without limitation, warranties which arise through course of



dealing or usage of trade. The warranties expressed in this Agreement are intended to modify the warranties implied by law only to the extent that they expand the warranties applicable to the goods and services provided by the Vendor.

8.2 The Vendor warrants that all the concepts, materials produced, the work product and the information, data, designs, processes, inventions, techniques, devices, and other such intellectual property furnished, used, or relied upon by the Vendor or the IRHTP will not infringe any copyright, patent, trademark, trade dress, or other intellectual property right of the Vendor or others. Any intellectual property provided to the IRHTP pursuant to the terms of this Agreement, shall be wholly original with the Vendor or the Vendor has secured all applicable interests, rights, licenses, permits, or other intellectual property rights in such concepts, materials and work.

8.3 The Vendor represents and warrants that the concepts, materials and the IRHTP's use of same and the exercise by the IRHTP of the rights granted by this Agreement shall not infringe upon any other work, other than material provided by the IRHTP to the Vendor to be used as a basis for such materials, or violate the rights of publicity or privacy of, or constitute a libel or slander against, any person, firm or corporation and that the concepts, materials and works will not infringe upon the copyright, trademark, trade name, literary, dramatic, statutory, common law or any other rights of any person, firm or corporation or other entity.

8.4 The Vendor warrants that all of the services to be performed hereunder will be rendered using sound, professional practices and in a competent and professional manner by knowledgeable, trained and qualified personnel.

8.5 The Vendor warrants that the deliverables under this Agreement will operate in conformance with the terms and conditions of this Agreement.

8.6 The Vendor warrants that it has full authority to enter into this Agreement and that it has not granted and will not grant any right or interest to any person or entity that might derogate, encumber, or interfere with the rights granted to the IRHTP.

8.7 The Vendor warrants that all obligations owed to third parties with respect to the activities contemplated to be undertaken by the Vendor pursuant to this Agreement are or will be fully satisfied by the Vendor so that the IRHTP will not have any obligations with respect thereto.

8.8 The Vendor warrants that it is the owner of or otherwise has the right to use and distribute the software, the materials owned by the Vendor and any other materials, and methodologies used in connection with providing the services contemplated by this Agreement.

8.9 The Vendor expressly warrants to the standards in the industry all aspects of the goods and services provided by it or used by the Vendor and the IRHTP in performance of this Agreement.

8.10 The Vendor unconditionally warrants that all equipment supplied and installed for the purpose of fulfilling its obligations under this Agreement are fit for the purpose intended, that it complies with industry standards and that the equipment is compatible with the State's equipment.

SECTION 9. INDEMNIFICATION BY VENDOR. The Vendor agrees to defend, indemnify and hold the IRHTP, and the State of Iowa, its employees, agents, board members, appointed officials and elected officials, harmless from any and all demands, debts liabilities, damages, loss, claims, suits or actions, settlements, judgments, costs and expenses, including the reasonable value of time expended by the Attorney General's Office, and the costs and expenses and attorney fees of other counsel required to defend the IRHTP or the State of Iowa related to or arising from:

9.1 Any violation or breach of this Agreement including, without limitation, any of the Vendor's representations or warranties; or

9.2 Any acts or omissions, including, without limitation, negligent acts or omissions or willful misconduct of Vendor, its officers, employees, agents, board members, contractors, subcontractors, or counsel employed by Vendor in the performance of this Agreement, or any other reason in connection with the goods and services provided under this Agreement; or



9.3 Claims for any violation of any intellectual property right including but not limited to infringement of patents, trademarks, trade dress, trade secrets, or copyrights arising from the any of the goods or service performed in accordance with this Agreement; or

9.4 The Vendor's performance or attempted performance of this Agreement; or

9.5 Any failure by the Vendor to comply with all local, State and Federal laws and regulations; or

9.6 Any failure by the Vendor to make all reports, payments and withholdings required by Federal and State law with respect to social security, employee income and other taxes, fees or costs required by the Vendor to conduct business in the State of Iowa.

9.7 The Vendor's duty to indemnify as set forth in this Section shall survive the expiration or termination of this Agreement and shall apply to all acts taken in the performance of this Agreement regardless of the date any potential claim is made or discovered by the IRHTP.

SECTION 10. TERMINATION.

10.1 Termination For Lack Of Authority or Funding. Notwithstanding anything in this Agreement to the contrary and subject to the limitations, conditions and procedures set forth below, the IRHTP shall have the right to terminate this Agreement without penalty and without any advance notice as a result of any of the following:

10.1.1 The Legislature or Governor fails, in the sole opinion of the IRHTP, to appropriate funds sufficient to allow the IRHTP, the HCP's, or any state agency or department charged with responsibility to perform any of the IRHTP's obligations under this Agreement, to either meet its obligations under this Agreement or to operate as required to fulfill its obligations under this Agreement; or

10.1.2 If funds are de-appropriated, not allocated or if the funds needed by the IRHTP, in the IRHTP's sole discretion, are insufficient for any other reason; or

10.1.3 If the IRHTP's, or USAC's authorization to conduct its business is withdrawn or there is a material alteration in the programs or any other program the IRHTP administers; or

10.1.4 If the IRHTP's duties are substantially modified.

10.1.5 Written Notice of Cancellation. The IRHTP shall provide Vendor with written notice of cancellation pursuant to this Section.

10.2 Termination for Cause. The IRHTP may terminate this Agreement upon written notice for the substantial breach by Vendor of any material term if such breach is not cured by Vendor within the time period specified in the IRHTP's notice of breach or any subsequent notice or correspondence delivered by the IRHTP to Vendor. If a cure is feasible and an opportunity to cure is provided, the notice shall specify the exact date by which the condition must be cured. Following expiration of the opportunity to cure or notice from the IRHTP, the IRHTP may seek any legal or equitable remedy authorized by this Agreement or by law. Substantial breach events include but are not limited to the following:

10.2.1 Vendor fails to perform as required by this Agreement.

10.2.2 Vendor fails to make substantial and timely progress toward performance or fails to meet any of the material specifications and requirements stated in this Agreement, including without limitation the warranties provided in this Agreement, in the RFP or in the Vendor's bid proposal.

10.3 Termination for Convenience. Following 30 days written notice, the IRHTP may terminate this Agreement in whole or in part for convenience without the payment of any penalty or incurring any further obligation to the Vendor. Termination for Convenience can be for any reason or no reason at all if it is in the best interests of the IRHTP.

10.4 Immediate Termination. The IRHTP may terminate this Agreement effective immediately without advance notice and without penalty for any of the following reasons:

10.4.1 Vendor furnished any statement, representation, warranty or certification in connection with this Agreement, which is materially false, deceptive, incorrect or incomplete.

10.4.2 Vendor fails to perform, to the IRHTP's satisfaction, any material requirement of this Agreement or is in violation of any material provision of this Agreement, including, without limitation, the express warranties made by the Vendor.

10.4.3 The IRHTP determines that satisfactory performance of this Agreement is substantially endangered or that a default is likely to occur.

10.4.4 Vendor becomes subject to any bankruptcy or insolvency proceeding under Federal or State law to the extent allowed by applicable Federal or State law including bankruptcy laws.

10.4.5 Vendor terminates or suspends its business.

10.4.6 The IRHTP reasonably believes that Vendor has become insolvent or unable to pay its obligations as they accrue consistent with applicable Federal or State law.

10.4.7 It is alleged that Vendor's processes or materials violate any valid patent, trademark, copyright, other intellectual property right or contract, and the IRHTP reasonably believes that the allegation may impair Vendor's performance of this Agreement.

10.4.8 Vendor has failed to comply with all applicable Federal, State, and local laws, rules, ordinances, regulations and orders when performing within the scope of this Agreement.

10.4.9 Vendor has engaged in conduct that has or may expose the IRHTP to liability, as determined in the IRHTP's sole discretion.

10.4.10 Vendor has a conflict of interest that interferes with fair competition or conflicts with an interest of the IRHTP as determined in the IRHTP's sole discretion.

10.5 In the event of termination of this Agreement for any reason by USAC or the IRHTP, USAC and the IRHTP shall pay only the amounts, if any, due and owing to Vendor for services actually rendered up to and including the date of termination of the Agreement and for which the USAC and the IRHTP is obligated to pay pursuant to this Agreement. Payment will be made only upon submission of invoices and proper proof of Vendor's claim. This provision in no way limits the remedies available to USAC or the IRHTP in the event of a termination under this provision. However, the USAC or the IRHTP shall not be liable for any of the following costs:

10.5.1 The payment of Unemployment Compensation to Vendor's employees;

10.5.2 The payment of Workers' Compensation claims which occur during the Agreement or extend beyond the date on which the Agreement terminates.

10.5.3 Any costs incurred by Vendor in its performance of the Agreement including but not limited to startup costs, overhead or other costs associated with the performance of the Agreement.

10.5.4 Any taxes that may be owed by Vendor for the performance of this Agreement including but not limited to sales taxes, excise taxes, use taxes, income taxes or property.

10.6 Vendor Obligations upon Termination. Upon expiration or termination of this Agreement, or upon request of the IRHTP, the Vendor shall:

10.6.1 Immediately cease using and return to the IRHTP any personal property or material, whether tangible or intangible, provided by the IRHTP to the Vendor and in its, or any subcontractor's, control or possession;



10.6.2 Upon request from the IRHTP, destroy any personal property or material, whether tangible or intangible at no additional cost to the IRHTP, and verify in writing that the designated property or material has been destroyed;

10.6.3 Comply with the IRHTP's instructions for the timely transfer of active files and work being performed by Vendor under this Agreement to the IRHTP or the IRHTP's designee;

10.6.4 Protect and preserve property in the possession of the Vendor in which the IRHTP has an interest;

10.6.5 Stop work under this Agreement on the date specified in any notice of termination provided by the IRHTP;

10.6.6 Cooperate in good faith with the IRHTP, its employees, agents and contractors during the transition period between the notification of termination and the substitution of any replacement Vendor.

10.7 Care of Property. The Vendor shall be responsible for the proper custody and care of any of the HCP or State owned tangible personal property furnished for the Vendor's use in connection with the performance of the Agreement, and the Vendor will reimburse the IRHTP or the State for such property's loss or damage caused by the Vendor, normal wear and tear excepted.

10.8 Reduction of Resources. If, during the Term, the IRHTP experiences a change in the scope, nature or volume of its business, or if the IRHTP elects to change the manner or method by which it does business (including, but not limited to, an election by Iowa Legislature to effect a sale or other disposition of material assets), which have or may have the effect of causing a decrease in the quantity or quality of the Services that will be needed by IRHTP, then IRHTP may request Vendor to reduce the level of Services and the annual Service charges to IRHTP under this Agreement. However any such reduction must not adversely impact upon Vendor's ability to reasonably perform its obligations under the Agreement.

SECTION 11. CONTRACT ADMINISTRATION.

11.1 Independent Contractor. The status of the Vendor shall be that of an independent contractor. The Vendor, its employees, agents and any subcontractors performing under this Agreement are not employees or agents of the State of Iowa or any agency, division or department of the State. Neither the Vendor nor its employees shall be considered employees of the IRHTP of Iowa for Federal or State tax purposes. The IRHTP will not withhold taxes on behalf of the Vendor (unless required by law).

11.2 Compliance with the Law and Regulations.

11.2.1 Compliance with the Law and Regulations. Vendor shall comply with all applicable Federal, State, and local laws, rules, ordinances, regulations and orders when performing within the scope of this Agreement, including, without limitation, all laws applicable to the prevention of discrimination in employment, the administrative rules of the Iowa Department of Management or the Iowa Civil Rights Commission which pertain to equal employment opportunity and affirmative action, laws relating to prevailing wages, occupational safety and health standards, prevention of discrimination in employment, payment of taxes, gift laws, lobbying laws and laws relating the use of targeted small businesses as subcontractors or suppliers.

11.2.2 The Vendor declares that it has complied with all Federal, State and local laws regarding business permits and licenses that may be required to carry out the work to be performed under this Agreement, including, without limitation, laws governing State of Iowa procurement and contracting.

11.2.3 The Vendor shall give notice to any labor union with which it has a bargaining or other agreement of its commitment under this section of the Agreement. The Vendor shall make the provisions of this Section a part of its contracts with any subcontractors providing goods or services related to the fulfillment of this Agreement.

11.2.4 The Vendor shall comply with all of the reporting and compliance standards regarding equal employment.

11.2.5 The Vendor may be required to submit its affirmative action plan

11.2.6 The IRHTP may consider the failure of the Vendor to comply with any law or regulation as a material breach of this Agreement. In addition, the Vendor may be declared ineligible for future USAC contracts or be subjected to other sanctions for failure to comply with this Section.

11.3 Amendments. This Agreement may be amended in writing from time to time by mutual consent of the parties. All amendments to this Agreement must be fully executed by the parties.

11.4 Third Party Beneficiaries. There are no third party beneficiaries to this Agreement. This Agreement is intended only to benefit IRHTP and the Vendor.

11.5 Choice of Law and Forum.

11.5.1 The laws of the State of Iowa shall govern and determine all matters arising out of or in connection with this Agreement without regard to the choice of law provisions of Iowa law.

11.5.2 In the event any proceeding of a quasi-judicial or judicial nature is commenced in connection with this Agreement, the exclusive jurisdiction for the proceeding shall be brought in Polk County District Court for the State of Iowa, Des Moines, Iowa, or in the United States District Court for the Southern District of Iowa, Central Division, Des Moines, Iowa wherever jurisdiction is appropriate.

11.5.3 This provision shall not be construed as waiving any immunity to suit or liability including, without limitation, sovereign immunity in State or Federal court, which may be available to the IRHTP or the State of Iowa.

11.6 Integration. This Agreement, including all the documents incorporated by reference, represents the entire Agreement between the parties and neither party is relying on any representation that may have been made which is not included in this Agreement. The parties agree that if a Schedule, Addendum, Rider or Exhibit or other document is attached hereto by the parties, and referred to herein, then the same shall be deemed incorporated herein by reference.

11.7 Not a Joint Venture. Nothing in this Agreement shall be construed as creating or constituting the relationship of a partnership, joint venture, (or other association of any kind or agent/principal relationship) between the parties hereto. No party, unless otherwise specifically provided for herein, has the authority to enter into any agreement or create an obligation or liability on behalf of, in the name of, or binding upon another party to this Agreement.

11.8 Consent to Service. The Vendor irrevocably consents to service of process by certified or registered mail addressed to the Vendor's designated agent. The Vendor appoints _____ at _____ as its agent to receive service of process. If for any reason the Vendor's agent for service is unable to act as such or the address of the agent changes, the Vendor shall immediately appoint a new agent and provide the IRHTP with written notice of the change in agent or address. Any change in the appointment of the agent or address will be effective only upon actual receipt by the IRHTP. Nothing in this provision will alter the right of the IRHTP to serve process in another manner permitted by law.

11.9 Supersedes Former Agreements. This Agreement supersedes all prior Agreements between the IRHTP and the Vendor for the services provided in connection with this Agreement.

11.10 Waiver. Any breach or default by either party shall not be waived or released other than in writing or by a written notice signed by the other party. Failure by either party at any time to require performance by the other party or to claim a breach of any provision of the Agreement shall not be construed as affecting any subsequent breach or the right to require performance with respect thereto or to claim a breach with respect thereto.



11.11 Notices.

11.11.1 Any and all notices, designations, consents, offers, acceptances or any other communication provided for herein shall be given in writing by registered or certified mail, return receipt requested, by receipted hand delivery, by Federal Express, courier or other similar and reliable carrier which shall be addressed to each party as set forth as follows:

If to the IRHTP:

Mr. Art Spies
Iowa Hospital Association
100 East Grand Ave – Suite 100
Des Moines, Iowa 50309

If to the Vendor:

[Vendor may provide one (1) contact]

11.11.2 Each such notice shall be deemed to have been provided:

11.11.2.1 At the time it is actually received; or,

11.11.2.2 Within one day in the case of overnight hand delivery, courier or services such as Federal Express with guaranteed next day of delivery; or,

11.11.2.3 Within five days after deposited the U.S. Mail in the case of registered U.S. Mail.

11.11.3 Copies of such notice to each party shall be provided separately.

11.11.4 From time to time, the parties may change the name and address of a party designated to receive notice. Such change of the designated person shall be in writing to the other party and as provided herein.

11.12 Cumulative Rights. The various rights, powers, options, elections and remedies of either party, provided in this Agreement, shall be construed as cumulative and no one of them is exclusive of the others or exclusive of any rights, remedies or priorities allowed either party by law. Nothing in this Agreement shall be construed as affecting, impairing or limiting the equitable or legal remedies to which either party may be entitled as a result of any breach of this Agreement.

11.13 Severability. If any provision of this Agreement is determined by a court of competent jurisdiction to be invalid or unenforceable, the invalid portion shall be severed from this Agreement. Such a determination shall not affect the validity or enforceability of any other part or provision of this Agreement.

11.14 Express Warranties. The Vendor expressly warrants all aspects of the items and services provided by it or used by the Vendor and the IRHTP in performance of this Agreement.

11.15 Warranty Regarding Solicitation. The Vendor warrants that no person or selling agency has been employed or retained to solicit and secure this Agreement upon an agreement or understanding for commission, percentage, brokerage or contingency except bona fide employees or selling agents maintained for the purpose of securing business.

11.16 Obligations of Joint Entities. If the Vendor is a joint entity consisting of more than one individual, partnership, corporation or other business organization, all such entities shall be jointly and severally liable for carrying out the Agreement activities.

11.17 Obligations Beyond Agreement Term. This Agreement shall remain in full force and effect to the end of the specified term or until terminated or canceled pursuant to this Agreement. All obligations of the

Vendor incurred or existing under this Agreement as of the date of expiration, termination or cancellation will survive the expiration, termination or cancellation of this Agreement.

11.18 Time is of the Essence. Time is of the essence with respect to the successful performance of the terms of this Agreement. The Vendor shall ensure that all personnel providing services to the IRHTP are responsive to the IRHTP's requirements in all respects.

11.19 Authorization. Each party to this Agreement represents and warrants to the other that it has the right, power and authority to enter into and perform its obligations under this Agreement and that it has taken all requisite action (corporate, statutory, or otherwise) to approve execution, delivery and performance of this Agreement. This Agreement constitutes a legal, valid and binding obligation upon the parties in accordance with its terms.

11.20 Successors in Interest. All the terms, provisions, and conditions of the Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors, assigns, and legal representatives.

11.21 Counterparts and Facsimile Signatures. The parties agree that this Agreement has been or may be executed in several counterparts, each of which shall be deemed an original and all such counterparts shall together constitute one and the same instrument. The parties further agree that the signatures on this Agreement or any amendment or schedule may be manual, scanned, or a facsimile signature of the person authorized to sign the appropriate document. All authorized scanned or facsimile signatures shall have the same force and effect as if manually signed.

11.22 Additional Provisions. The parties agree that if a Schedule, Addendum, Rider or Exhibit is attached hereto by the parties, and referred to herein, then the same shall be deemed incorporated herein by reference.

11.23 Use of Third Parties/Prime Vendor Responsibilities. The IRHTP acknowledges that the Vendor may contract with third parties for the performance of any of the Vendor's obligations under this Agreement. All subcontracts shall be subject to advance written approval by the IRHTP. The Vendor may enter into these contracts to complete the project provided that the Vendor remains responsible for all services performed under this Agreement. All restrictions, obligations and responsibilities of the Vendor under this Agreement shall also apply to subcontractors. The IRHTP shall consider the Vendor to be the sole point of contact with regard to all matters related to this Agreement and is not required to initiate or maintain contact with any subcontractor. IRHTP may choose to deny use of any specific third party contractor at IRHTP's sole discretion, in which case the Vendor must obtain a different third party contractor.

11.24 Not Used

11.25 Force Majeure. Neither Vendor nor the IRHTP shall be liable to the other for any delay or failure of performance of this Agreement; and no delay or failure of performance shall constitute a default or give rise to any liability for damages if, and only to the extent that, such delay or failure is caused by a "force majeure".

11.25.1 As used in this Agreement, "force majeure" includes acts of God, war, civil disturbance and any other causes which are beyond the control and anticipation of the party effected and which, by the exercise of reasonable diligence, the party was unable to anticipate or prevent. Failure to perform by a subcontractor or an agent of the Vendor shall not be considered a "force majeure" unless the subcontractor or supplier is prevented from timely performance by a "force majeure" as defined in this Agreement. "Force majeure" does not include: financial difficulties of the Vendor or any parent, subsidiary, affiliated or associated company of Vendor; claims or court orders which restrict Vendor's ability to deliver the goods or services contemplated by this Agreement.

11.25.2 If a "force majeure" delays or prevents Vendor's performance, the Vendor shall immediately commence to use its best efforts to directly provide alternate, and to the extent possible, comparable performance. Comparability of performance and the possibility of comparable performance shall be reasonably determined solely by the IRHTP.

11.25.3 During any such period, the Vendor shall continue to be responsible for all costs and expenses related to alternative performance.

11.25.4 This Section shall not be construed as relieving the Vendor of its responsibility for any obligation which is being performed by a subcontractor or supplier of services unless the subcontractor or supplier is prevented from timely performance by a “force majeure” as described here.

11.26 Records Retention and Access. The Vendor shall permit the Auditor of the State of Iowa or any authorized representative of the State or any authorized representative of the United States government, or USAC, to access and examine, audit, excerpt and transcribe any directly pertinent validation records, financial records, accounting records, books, documents, papers, electronic or optically stored and created records or other records of the Vendor relating to or created as a result of the performance of this Agreement. These records shall be made available to the State, its designees, the Auditor, or an authorized representative of the United States government, or USAC, at reasonable times and at no cost to the State during the term of this Agreement and for a period of at least (5) years following the termination, cancellation or expiration of this Agreement.

11.27 Taxes. IRHTP declares and Vendor acknowledges that the Vendor and its subcontractors may be subject to certain taxes including but not limited to sales tax, motor vehicle fuel tax, personal or corporate income tax or other taxes or assessments, and to licensing fees or other miscellaneous fees or charges which may be imposed by Federal, State or local law or ordinance. The Vendor and its subcontractors shall be solely responsible for the payment of such taxes. The Vendor shall promptly pay all such taxes, fees or charges when due. IRHTP is a tax-exempt entity and the Vendor shall not attempt to pass on any costs, including surcharges and fees, to the IRHTP that are attributable to federal, state, or local taxes, including sales tax, motor fuel tax, property tax, or personal or corporate income tax.

11.28 Further Assurances and Corrective Instruments. The Vendor agrees that it will, from time to time, execute, acknowledge and deliver, or cause to be executed, acknowledged and delivered, such supplements hereto and such further instruments as may reasonably be required for carrying out the expressed intention of this Agreement.

11.29 Assignment and Delegation. This Agreement may not be assigned, transferred or conveyed in whole or in part without the prior written consent of the other party. For purposes of construing this clause, a transfer of a controlling interest in Vendor shall be considered an assignment. If the State, in its sole discretion, determines that the Vendor’s assignment of this Agreement to another person or entity is not in the State’s best interests, the State may elect to terminate this Agreement with the Vendor without penalty upon thirty (30) days written notice to the Vendor.

11.30 Headings or Captions. The paragraph headings or captions are for identification purposes only and do not limit or construe the contents of the paragraphs.

SECTION 12. BUSINESS DOWNTURN.

12.1 In the event of a business downturn or budget difficulties beyond the control of the IRHTP, including budget difficulties of other HCP’s or the IRHTP or significant restructuring or reorganization, any of which significantly reduces the volume of OSP plant required by the IRHTP, with the result that IRHTP will be unable to meet its revenue or volume commitments under this Agreement, Vendor and the IRHTP will cooperate in efforts to develop a mutually agreeable alternative.

SECTION 13. REDUCTION OF RESOURCES.

13.1 If, during the Term, the IRHTP or the HCP’s experience a change in the scope, nature or volume of its business, or if the IRHTP elects to change the manner or method by which it does business, the Vendor will be asked to reduce the level of Services to IRHTP under this Agreement. However any such reduction must not adversely impact upon Vendor’s ability to reasonably perform its obligations under the Agreement.



13.2 In such event, Vendor shall estimate, in writing and in good faith, the aggregate decreased charges to Vendor from IRHTP's ceasing to perform such Services and shall provide such written estimate to IRHTP, no later than 30 days from Vendor's receipt of IRHTP's notice. IRHTP, upon receipt of such estimate, may then elect by written notice given to Vendor within 15 days following receipt of Vendor's written estimate to:

13.3 Withdraw its request for a cessation of part of the Services;

13.4 Implement such partial cessation of Services based upon the estimate of Vendor; or

13.5 Request that Vendor negotiate with IRHTP regarding the aggregate reduction in the Contract Services due to Vendor from IRHTP hereunder as a result of the partial cessation of Services. If IRHTP shall elect to request Vendor to negotiate, the parties shall promptly negotiate in good faith regarding the amount.

SECTION 14. EXECUTION.

IN WITNESS WHEREOF, in consideration of the mutual covenants set forth above and for other good and valuable consideration, the receipt, adequacy and legal sufficiency of which are hereby acknowledged, the parties have entered into the above Agreement and have caused their duly authorized representatives to execute this Agreement.

IOWA HOSPITAL ASSOCIATION ON BEHALF OF IRHTP

By:

Date: _____

Name: Mr. Art Spies

Title: Project Coordinator - IRHTP

[VENDOR will be listed]:

By:

Date: _____

Name:

Title:



ATTACHMENT 2
BID PROPOSAL COMPLIANCE FORM
RFP 08-001

Vendor affirms that the information contained in the bid proposal is true and accurately portrays all aspects of the goods or services or both contemplated by this RFP. The Vendor is aware that any substantive misinformation or misrepresentation may disqualify the bid proposal from further consideration.

Vendor hereby certifies total compliance with all other terms, conditions and specifications of this RFP except as expressly stated below:

Chapter 1, Administrative Issues

Chapter 2, Contractual Terms & Conditions (includes Attachment 1)

Chapter 3, Technical Specifications

Chapter 4, Evaluation Criteria

I certify that I have the authority to bind the Vendor indicated below to the specific terms and conditions imposed in this RFP and offered in this bid proposal, and that by my signature on this document I specifically agree to all of the waivers, restrictions and requirements of this RFP as conditions precedent to submitting this proposal. I further state that in making this bid proposal that the Vendor has not consulted with others for the purpose of restricting competition or violating State or Federal anti-trust laws and has not knowingly made any false statements in this proposal.

Authorized Signature: _____

Printed Name: _____

Title: _____

Telephone: _____

Fax Number: _____

E-Mail: _____

Business Name: _____

Address: _____

Federal ID Number: _____

USAC SPIN: _____



ATTACHMENT 3

AUTHORIZATION TO RELEASE INFORMATION

RFP 08-001

_____ (Name of Vendor) hereby authorizes any person or entity, public or private, having any information concerning the Vendor's background, including but not limited to its performance history regarding its prior rendering of services similar to those detailed in this RFP, to release such information to the IRHTP.

The Vendor acknowledges that it may not agree with the information and opinions given by such person or entity in response to a reference request. The Vendor acknowledges that the information and opinions given by such person or entity may hurt its chances to receive contract awards from the IRHTP or may otherwise hurt its reputation or operations. The Vendor is willing to take that risk. The Vendor agrees to release all persons, entities, and the IRHTP from any liability whatsoever that may be incurred in releasing this information or using this information.

Printed Name of Vendor

Signature of Authorized Representative

Date



ATTACHMENT 4 – PART I
OUTSIDE PLANT FIBER INSTALLATION
BID PROPOSAL SUBMITTAL FORM

RFP 08-001

This bid proposal submittal form is comprised of SIX pages!

By submitting this bid, Vendor acknowledges it can comply and will comply with all specifications detailed in Chapter 3.

Note: Vendors must submit all SIX of the following cost sheet pages of Attachment 4 regardless of how many sites are bid! The Vendor's authorized agent must sign each sheet.

Vendors desiring to be awarded a complete merged area(s) contract must list a cost for each and every site within that merged Area(s). If the vendor is submitting a bid for the entire statewide project, the vendor must list a cost for each and every site listed on each cost sheet.

Any cost sheets for an award of the total statewide project or complete merged area(s) response not listing all of the sites in the respective merged area(s) will be considered only as a site-by-site bid.

Vendors bidding a complete merged area or the total statewide project may offer a discount off the total cost for the specific merged area(s) or the complete statewide project.

Discount in Dollars, if awarded all sites in Merged Area One	\$
Discount in Dollars, if awarded all sites in Merged Area Two	\$
Discount in Dollars, if awarded all sites in Merged Area Three	\$
Discount in Dollars, if awarded all sites in Merged Area Four	\$
Discount in Dollars, if awarded all sites in Merged Area Five	\$
Discount in Dollars, if awarded all sites in Merged Area Six	\$
Discount in Dollars, if awarded all sites in Merged Area Seven	\$
Discount in Dollars, if awarded all sites in Merged Area Eight	\$
Discount in Dollars, if awarded all sites in Merged Area Nine	\$
Discount in Dollars, if awarded all sites in Merged Area Ten	\$
Discount in Dollars, if awarded all sites in Merged Area Eleven	\$
Discount in Dollars, if awarded all sites in Merged Area Twelve	\$
Discount in Dollars, if awarded all sites in Merged Area Thirteen	\$
Discount in Dollars, if awarded all sites in Merged Area Fourteen	\$
Discount in Dollars, if awarded all sites in Merged Area Fifteen	\$
Discount in Dollars, if awarded all sites in Merged Area Sixteen	\$
Discount in Dollars, if awarded all sites in Merged Area Seventeen	\$

<i>Discount in Dollars if awarded all sites in IRHTP RFP 08-001</i>	\$
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Vendor's Authorized Agent Signature: _____

Sheet One of Six Sheets



BID SHEET – PART I

Line	Merged Area	SID	A Location - Hospital	City	Z Location - Endpoint	City	Notes	Construction Bid Price	Alternate Bid (IRU+Build)
1	1	1.1	Mitchell County Regional Health Center	Osage	Osage Community HS	Osage			
2	1	1.2	Floyd County Memorial Hospital	Charles City	Northern Iowa Area CC	Charles City			
3	1	1.3	Ellsworth Municipal Hospital	Iowa Falls	Ellsworth CC	Iowa Falls			
4	1	1.4	Franklin General Hospital	Hampton	Hampton-Dumont HS	Hampton			
5	1	1.5	Belmond Medical Center	Belmond	Clarion-Goldfield MS	Clarion			
6	1	1.5a	Belmond Medical Center	Belmond	Belmond-Klemme HS	Belmond	Alternate Lateral Build		
7	1	1.5a	Belmond-Klemme HS	Belmond	Hampton-Dumont HS	Hampton	Alternate Link/IRU Cost		
8	1	1.6	Hancock County Memorial Hospital	Britt	Garner Hayfield HS	Garner			
9	1	1.6a	Hancock County Memorial Hospital	Britt	West Hancock HS	Britt	Alternate Lateral Build		
10	1	1.6a	West Hancock HS	Britt	Garner-Hayfield HS	Garner	Alternate Link/IRU Cost		
11	1	1.7	Mercy Medical Center-North Iowa	Mason City	Northern Iowa Area CC	Mason City			
12	1	1.7a	Mercy Medical Center-North Iowa	Mason City	Iowa National Guard Armory	Mason City	Alternate Build		
13	2	2.1	Regional Health Services of Howard County	Cresco	Howard - Winneshiek HS	Cresco			
14	2	2.2	Winneshiek Medical Center	Decorah	Luther College	Decorah			
15	2	2.3	Central Community Hospital	Elkader	AEA 1 Elkader	Elkader			
16	2	2.4	Palmer Lutheran Health Center	West Union	Splice B110-4	West Union			
17	2	2.5	Mercy Medical Center-New Hampton	New Hampton	New Hampton HS	New Hampton			
18	2	2.6	Veterans Memorial Hospital	Waukon	Waukon HS	Waukon			
19	3	3.1	Mercy Medical Center-Dubuque	Dubuque	ICN Dubuque City POP	Dubuque			
20	3	3.1a	Mercy Medical Center-Dubuque	Dubuque	ICN Dubuque City POP	Dubuque	Alternate Link/IRU Cost		
21	3	3.2	Regional Medical Center	Manchester	West Delaware HS	Manchester			
22	3	3.3	Mercy Medical Center-Dyersville	Dyersville	Northeast Iowa CC	Peosta			
23	3	3.3a	Mercy Medical Center-Dyersville	Dyersville	Beckman HS	Dyersville	Alternate Lateral Build		
24	3	3.3a	Beckman HS	Dyersville	Northeast Iowa CC	Peosta	Alternate Link/IRU Cost		
25	4	4.1	Waverly Health Center	Waverly	Waverly Shellrock HS	Waverly			
26	4	4.2	Buchanan County Health Center	Independence	Independence HS	Independence			
27	5	5.1	Virginia Gay Hospital	Vinton	Kirkwood Learning Center	Vinton			
28	5	5.2	Mercy Medical Center	Cedar Rapids	Link Splice 39C	Cedar Rapids			
29	5	5.3	Radiology Consultants of Iowa	Cedar Rapids	Towne Center	Cedar Rapids	Cross Connect		

Vendor's Authorized Agent Signature:



BID SHEET – PART I

Line	Merged Area	SID	A Location - Hospital	City	Z Location - Endpoint	City	Notes	Construction Bid Price	Alternate Bid (IRU+Build)
30	6	6.1	University of Iowa Hospitals and Clinics	Iowa City	On net - (Lindquist Center)	Iowa City	No Construction Required		
31	6	6.2	Mercy Iowa City	Iowa City	U of I (Lindquist Center)	Iowa City			
32	6	6.3	Washington County Hospital and Clinics	Washington	Iowa National Guard Armory	Washington			
33	6	6.4	Marengo Memorial Hospital	Marengo	Splice B1004-1	Williamsburg			
34	6	6.4a	Marengo Memorial Hospital	Marengo	Iowa Valley HS	Marengo	Alternate Lateral Build		
35	6	6.4a	Iowa Valley HS	Marengo	Kirkwood CC	Williamsburg	Alternate Link/IRU Cost		
36	7	7.1	Mercy Medical Center	Clinton	Eastern Iowa CC	Clinton	Intercept Abandoned Fiber Franciscan University		
37	7	7.2	Genesis Medical Center-West Campus	Davenport	Saint Ambrose University	Davenport	Intercept Abandoned Fiber		
38	7	7.3	Genesis Medical Center-East Campus	Davenport	Saint Ambrose University	Davenport			
39	7	7.4	Genesis Plaza	Bettendorf	Link 901	Bettendorf			
40	7	7.5	Genesis imaging Center	Bettendorf	Link 901	Bettendorf			
41	7	7.6	Unity Healthcare	Muscatine	Eastern Iowa CC	Muscatine			
42	7	7.7	Genesis Health System-Dewitt	Dewitt	Clinton CC	Clinton			
43	7	7.7a	Genesis Health System-Dewitt	Dewitt	Central HS	Dewitt	Alternate Lateral Build		
44	7	7.7a	Central HS	Dewitt	Maquoketa HS	Maquoketa	Alternate Link/IRU Cost		
45	8	8.1	Great River Medical Center	W. Burlington	South Eastern CC	W. Burlington			
46	8	8.2	Fort Madison Community Hospital	Fort Madison	Fort Madison HS	Fort Madison			
47	8	8.3	Keokuk Area Hospital	Keokuk	Abandon Stritch HS – Vault	Keokuk			
48	8	8.4	Henry County Health Center	Mt Pleasant	Iowa Wesleyan College	Mt Pleasant			
49	9	9.1	Mahaska Health Partnership	Oskaloosa	Splice 1511	Oskaloosa			
50	9	9.2	Keokuk County Health Center	Sigourney	Sigourney HS	Sigourney			
51	9	9.3	Jefferson County Hospital	Fairfield	Fairfield HS	Fairfield			
52	9	9.4	Van Buren County Hospital	Keosauqua	Van Buren Community HS	Keosauqua			
53	9	9.5	Davis County Hospital	Bloomfield	Davis County Community HS	Bloomfield			
54	9	9.6	Ottumwa Regional Health Center	Ottumwa	On Net	Ottumwa	No Construction Required		
55	9	9.7	Mercy Medical Center-Centerville	Centerville	On Net	Centerville	No Construction Required		
56	9	9.8	Wayne County Hospital	Corydon	On Net	Corydon	No Construction Required		
57	9	9.9	Lucas County Health Center	Chariton	Chariton HS	Chariton			
58	9	9.91	Monroe County Hospital	Albia	Albia HS	Albia			

Vendor's Authorized Agent Signature:



BID SHEET – PART I

Line	Merged Area	SID	A Location - Hospital	City	Z Location - Endpoint	City	Notes	Construction Bid Price	Alternate Bid (IRU+Build)
59	10	10.1	Mercy Medical Center-Des Moines	Des Moines	On Net (Campus rework)	Des Moines			
60	10	10.2	Skiff Medical Center	Newton	DMACC Polytechnical	Newton			
61	10	10.3	Marshalltown Medical & Surgical Center	Marshalltown	Slack loop Location tdc	Marshalltown			
62	10	10.4	Pella Regional Health Center	Pella	Central College	Pella			
63	10	10.5	Knoxville Hospital & Clinics	Knoxville	Iowa National Guard Armory	Knoxville			
64	10	10.6	Madison County Health Care System	Winterset	On Net	Winterset	No Construction		
65	10	10.7	Mercy West Lakes	Des Moines	On Net	Des Moines	No Construction		
66	10	10.8	Iowa Hospital Association	Des Moines	On Net	Des Moines	No Construction		
67	10	10.9	Dallas County Hospital	Perry	Perry HS	Perry	No Construction		
68	11	11.1	Adair County Memorial Hospital	Greenfield	Greenfield HS	Greenfield			
69	11	11.2	Decatur County Hospital	Leon	Lamoni HS	Lamoni			
70	11	11.2a	Decatur County Hospital	Leon	Lamoni HS	Lamoni	Alternate Link/IRU Cost		
71	11	11.3	Ringgold County Hospital	Mt Ayr	Mount Ayr HS	Mt Ayr			
72	11	11.4	Alegent Heath Mercy Hospital	Corning	Corning HS	Corning			
73	11	11.5	Montgomery County Memorial Hospital	Red Oak	Southwestern CC	Red Oak			
74	11	11.6	Audubon County Memorial Hospital	Audubon	Audubon HS	Audubon			
75	12	12.1	Grape Community Hospital	Hamburg	Sidney HS	Sidney			
76	12	12.1a	Grape Community Hospital	Hamburg	Hamburg HS	Hamburg	Alternate Lateral Build		
77	12	12.1a	Hamburg HS	Hamburg	Sidney HS	Sidney	Alternate Link/IRU Cost		
78	12	12.2	Clarinda Regional Health Center	Clarinda	Iowa Western CC	Clarinda			
79	12	12.3	Shenandoah Medical Center	Shenandoah	Iowa National Guard Armory	Shenandoah			
80	12	12.4	Alegent Health Community Memorial Hospital	Missouri Valley	Missouri Valley HS	Missouri Valley			
81	12	12.5	Jennie Edmundson Hospital	Council Bluffs	Iowa Western CC	Council Bluffs			
82	12	12.6	Alegent Heath Mercy Hospital	Council Bluffs	Jennie Edmundson Hospital	Council Bluffs			

Vendor's Authorized Agent Signature: _____



BID SHEET – PART I

Line	Merged Area	SID	A Location - Hospital	City	Z Location - Endpoint	City	Notes	Construction Bid Price	Alternate Bid (IRU+Build)
83	13	13.1	Horn Memorial Hospital	Ida Grove	Western Iowa Tech CC	Ida Grove			
84	13	13.2	Cherokee Regional Medical Center	Cherokee	Washington HS	Cherokee			
85	3	13.3	Crawford County Memorial Hospital	Denison	Intercept Splice - Temp	Denison			
86	13	13.4	Burgess Health Center	Onawa	Iowa National Guard Armory	Mapleton			
87	13	13.4a	Burgess Health Center	Onawa	West Monona HS	Onawa	Alternate Lateral Build		
88	13	13.4.a	West Monona HS	Onawa	Mapleton Valley HS	Mapleton	Alternate Link/IRU Cost		
89	13	13.5	Mercy Medical Center-Sioux City	Sioux City	Sioux City Transport Ctr.	Sioux City			
90	13	13.6	Floyd Valley Hospital	Le Mars	Gahlen Catholic HS	Le Mars			
91	14	14.1	Story County Medical Center	Nevada	Maint Splice 1107F-A	Ames			
92	14	14.1a	Story County Medical Center	Nevada	Meet Point	Nevada	Alternate Lateral Build		
93	14	14.1a	Meet Point	Nevada	Maint Splice 1107F-A	Ames	Alternate Link/IRU Cost		
94	14	14.2	Manning Regional Healthcare Center	Manning	St. Anthony Regional Hosp	Carroll			
95	14	14.2a	Manning Regional Healthcare Center	Manning	Manning HS	Manning	Alternate Lateral Build		
96	14	14.2a	Manning HS	Manning	DMACC Campus	Carroll	Alternate Link/IRU Cost		
97	14	14.3	Saint Anthony Regional Hospital	Carroll	DMACC Campus	Carroll			
98	14	14.4	Boone County Hospital	Boone	DMACC Campus	Boone			
99	15	15.1	Osceola Community Hospital	Sibley	Sibley HS	Sibley			
100	15	15.2	Orange City Area Health System	Orange City	Northwestern College	Orange City			
101	15	15.3	Baum-Harmon Mercy Hospital	Primghar	Northwest Iowa CC	Sheldon			
102	15	15.3a	Baum-Harmon Mercy Hospital	Primghar	South O'Brien HS	Paulina	Alternate Lateral Build		
103	15	15.3a	South O'Brien HS	Paulina	Northwest Iowa CC	Sheldon	Alternate Link/IRU Cost		
104	15	15.4	Sanford Sheldon Medical Center	Sheldon	Iowa National Guard Armory	Sheldon			
105	15	15.5	Hawarden Community Hospital	Hawarden	AEA 4	Sioux Center			
106	15	15.5a	Hawarden Community Hospital	Hawarden	Hawarden Library	Hawarden	Alternate Lateral Build		
107	15	15.5a	Hawarden Library	Hawarden	AEA 4	Sioux Center	Alternate Link/IRU Cost		
108	15	15.6	Sioux Center Community Hospital	Sioux Center	Iowa National Guard Armory	Sioux Center			

Vendor's Authorized Agent Signature: _____



BID SHEET – PART I

Line	Merged Area	SID	A Location - Hospital	City	Z Location - Endpoint	City	Notes	Construction Bid Price	Alternate Bid (IRU+Build)
109	15	15.7	Hegg Memorial Health Center	Rock Valley	AEA 4	Sioux Center			
110	15	15.7a	Hegg Memorial Health Center	Rock Valley	Rock Valley HS	Rock Valley	Alternate Lateral Build		
111	15	15.7a	Rock Valley HS	Rock Valley	AEA 4	Sioux Center	Alternate Link/IRU Cost		
112	15	15.8	Merrill Pioneer Community Hospital	Rock Rapids	Central Lyon MS	Rock Rapids			
113	15	15.91	Avera Data Center	Sioux Falls, SD	IRU	Sheldon			
114	15	15.92	Sanford Hospital	Sioux Falls, SD	IRU	Sheldon			
115	16	16.1	Lakes Regional Healthcare	Spirit Lake	Spirit Lake HS/AEA 8	Spirit Lake			
116	16	16.2	Palo Alto County Hosp	Emmetsburg	Iowa Lakes CC	Emmetsburg			
117	16	16.3	Avera Holy Family	Estherville	Link Splice 69	Estherville			
118	16	16.4	Kossuth Regional Health Center	Algona	Iowa Lakes CC	Algona			
119	16	16.4a	Kossuth Regional Health Center	Algona	Bishop Garrigan HS	Algona	Alternate Lateral Build		
120	16	16.4a	Bishop Garrigan HS	Algona	Iowa Lakes CC	Algona	Alternate Link/IRU Cost		
121	16	16.5	Spencer Hospital	Spencer	Iowa Lakes CC	Spencer			
122	17	17.1	Hamilton Hospital	Webster City	Link Splice 30	Webster City			
123	17	17.2	Stewart Memorial Community Hospital	Lake City	Rockwell City HS	Rockwell City			
124	17	17.2a	Stewart Memorial Community Hospital	Lake City	Southern Cal HS	Lake City	Alternate Lateral Build		
125	17	17.2a	Southern Cal HS	Lake City	Rockwell City –Lyfton HS	Rockwell City	Alternate Link/IRU Cost		
126	17	17.3	Wright Medical Center	Clarion	Iowa Central CC	Eagle Grove			
127	17	17.3a	Wright Medical Center	Clarion	Clarion-Goldfield MS	Clarion	Alternate Lateral Build		
128	17	17.3a	Clarion-Goldfield MS	Clarion	Iowa Central CC	Eagle Grove	Alternate Link/IRU Cost		

Vendor's Authorized Agent Signature: _____

Sheet Six of Six Sheets



ATTACHMENT 4 – PART II
QUALITY ASSURANCE INSPECTION SERVICES
BID PROPOSAL SUBMITTAL FORM
RFP 08-001

This bid proposal submittal form is comprised of SIX pages!

By submitting this bid, Vendor acknowledges it can comply and will comply with all specifications detailed in Chapter 3 Part II.

Firm Fixed Price

The Vendor providing the Quality Assurance Inspection Services shall submit one firm fixed price for the quality control oversight inspection services of the 95 sites as shown in Chapter III, Annex A of this IRHTP RFP 08-001; Various sites will be installed over a three-year period ending Dec 31, 2011. For the purpose of this response, the vendor shall assume all 95 sites will be built. In the event sites are added or dropped, IRHTP will negotiate adjustments with the winning vendor.

The firm fixed price must include not only the firm fixed fee, but all other costs such as, but not limited to: travel, lodging, meals, communications, office supplies, and other specific resources to do the job.

Bid responses containing only an hourly rate “plus expenses” will not be considered by the IRHTP. The bid response must contain the total three year costs and expenses for each site.

The undersigned submits this total as our firm fixed price for the Part II Quality Assurance Inspection Services:

Total three year costs: \$ _____

Note: The Vendor’s authorized agent must sign this sheet.

Name of Vendor:

Address:

By

Vendor’s Authorized Agent Signature:

Sheet One of Six Sheet



BID SHEET – PART II

Line	Merged Area	SID	A Location - Hospital	City	Z Location - Endpoint	City	Notes	QA Bid Price
1	1	1.1	Mitchell County Regional Health Center	Osage	Osage Community HS	Osage		
2	1	1.2	Floyd County Memorial Hospital	Charles City	Northern Iowa Area CC	Charles City		
3	1	1.3	Ellsworth Municipal Hospital	Iowa Falls	Ellsworth CC	Iowa Falls		
4	1	1.4	Franklin General Hospital	Hampton	Hampton-Dumont HS	Hampton		
5	1	1.5	Belmond Medical Center	Belmond	Clarion-Goldfield MS	Clarion		
6	1	1.5a	Belmond Medical Center	Belmond	Belmond-Klemme HS	Belmond	Alternate Lateral Build	
7	1	1.5a	Belmond-Klemme HS	Belmond	Hampton-Dumont HS	Hampton	Alternate Link/IRU Cost	
8	1	1.6	Hancock County Memorial Hospital	Britt	Garner Hayfield HS	Garner		
9	1	1.6a	Hancock County Memorial Hospital	Britt	West Hancock HS	Britt	Alternate Lateral Build	
10	1	1.6a	West Hancock HS	Britt	Garner-Hayfield HS	Garner	Alternate Link/IRU Cost	
11	1	1.7	Mercy Medical Center-North Iowa	Mason City	Northern Iowa Area CC	Mason City		
12	1	1.7a	Mercy Medical Center-North Iowa	Mason City	Iowa National Guard Armory	Mason City	Alternate Build	
13	2	2.1	Regional Health Services of Howard County	Cresco	Howard - Winneshiek HS	Cresco		
14	2	2.2	Winneshiek Medical Center	Decorah	Luther College	Decorah		
15	2	2.3	Central Community Hospital	Elkader	AEA 1 Elkader	Elkader		
16	2	2.4	Palmer Lutheran Health Center	West Union	Splice B110-4	West Union		
17	2	2.5	Mercy Medical Center-New Hampton	New Hampton	New Hampton HS	New Hampton		
18	2	2.6	Veterans Memorial Hospital	Waukon	Waukon HS	Waukon		
19	3	3.1	Mercy Medical Center-Dubuque	Dubuque	ICN Dubuque City POP	Dubuque		
20	3	3.1a	Mercy Medical Center-Dubuque	Dubuque	ICN Dubuque City POP	Dubuque	Alternate Link/IRU Cost	
21	3	3.2	Regional Medical Center	Manchester	West Delaware HS	Manchester		
22	3	3.3	Mercy Medical Center-Dyersville	Dyersville	Northeast Iowa CC	Peosta		
23	3	3.3a	Mercy Medical Center-Dyersville	Dyersville	Beckman HS	Dyersville	Alternate Lateral Build	
24	3	3.3a	Beckman HS	Dyersville	Northeast Iowa CC	Peosta	Alternate Link/IRU Cost	
25	4	4.1	Waverly Health Center	Waverly	Waverly Shellrock HS	Waverly		
26	4	4.2	Buchanan County Health Center	Independence	Independence HS	Independence		
27	5	5.1	Virginia Gay Hospital	Vinton	Kirkwood Learning Center	Vinton		
28	5	5.2	Mercy Medical Center	Cedar Rapids	Link Splice 39C	Cedar Rapids		
29	5	5.3	Radiology Consultants of Iowa	Cedar Rapids	Towne Center	Cedar Rapids	Cross Connect	

Vendor's Authorized Agent Signature: _____



BID SHEET – PART II

Line	Merged Area	SID	A Location - Hospital	City	Z Location - Endpoint	City	Notes	QA Bid Price
30	6	6.1	University of Iowa Hospitals and Clinics	Iowa City	On net - (Lindquist Center)	Iowa City	No Construction Required	
31	6	6.2	Mercy Iowa City	Iowa City	U of I (Lindquist Center)	Iowa City		
32	6	6.3	Washington County Hospital and Clinics	Washington	Iowa National Guard Armory	Washington		
33	6	6.4	Marengo Memorial Hospital	Marengo	Splice B1004-1	Williamsburg		
34	6	6.4a	Marengo Memorial Hospital	Marengo	Iowa Valley HS	Marengo	Alternate Lateral Build	
35	6	6.4a	Iowa Valley HS	Marengo	Kirkwood CC	Williamsburg	Alternate Link/IRU Cost	
36	7	7.1	Mercy Medical Center	Clinton	Eastern Iowa CC	Clinton	Intercept Abandoned Fiber	
37	7	7.2	Genesis Medical Center-West Campus	Davenport	Saint Ambrose University	Davenport	Intercept Abandoned Fiber	
38	7	7.3	Genesis Medical Center-East Campus	Davenport	Saint Ambrose University	Davenport		
39	7	7.4	Genesis Plaza	Bettendorf	Link 901	Bettendorf		
40	7	7.5	Genesis imaging Center	Bettendorf	Link 901	Bettendorf		
41	7	7.6	Unity Healthcare	Muscatine	Eastern Iowa CC	Muscatine		
42	7	7.7	Genesis Health System-Dewitt	Dewitt	Clinton CC	Clinton		
43	7	7.7a	Genesis Health System-Dewitt	Dewitt	Central HS	Dewitt	Alternate Lateral Build	
44	7	7.7a	Central HS	Dewitt	Maquoketa HS	Maquoketa	Alternate Link/IRU Cost	
45	8	8.1	Great River Medical Center	W. Burlington	South Eastern CC	W. Burlington		
46	8	8.2	Fort Madison Community Hospital	Fort Madison	Fort Madison HS	Fort Madison		
47	8	8.3	Keokuk Area Hospital	Keokuk	Abandon Strich HS – Vault	Keokuk		
48	8	8.4	Henry County Health Center	Mt Pleasant	Iowa Wesleyan College	Mt Pleasant		
49	9	9.1	Mahaska Health Partnership	Oskaloosa	Splice 1511	Oskaloosa		
50	9	9.2	Keokuk County Health Center	Sigourney	Sigourney HS	Sigourney		
51	9	9.3	Jefferson County Hospital	Fairfield	Fairfield HS	Fairfield		
52	9	9.4	Van Buren County Hospital	Keosauqua	Van Buren Community HS	Keosauqua		
53	9	9.5	Davis County Hospital	Bloomfield	Davis County Community HS	Bloomfield		
54	9	9.6	Ottumwa Regional Health Center	Ottumwa	On Net	Ottumwa	No Construction Required	
55	9	9.7	Mercy Medical Center-Centerville	Centerville	On Net	Centerville	No Construction Required	
56	9	9.8	Wayne County Hospital	Corydon	On Net	Corydon	No Construction Required	
57	9	9.9	Lucas County Health Center	Chariton	Chariton HS	Chariton		
58	9	9.91	Monroe County Hospital	Albia	Albia HS	Albia		

Vendor's Authorized Agent Signature:



BID SHEET – PART II

Line	Merged Area	SID	A Location - Hospital	City	Z Location - Endpoint	City	Notes	QA Bid Price
59	10	10.1	Mercy Medical Center-Des Moines	Des Moines	On Net (Campus rework)	Des Moines		
60	10	10.2	Skiff Medical Center	Newton	DMACC Polytechnical	Newton		
61	10	10.3	Marshalltown Medical & Surgical Center	Marshalltown	Slack loop Location td	Marshalltown		
62	10	10.4	Pella Regional Health Center	Pella	Central College	Pella		
63	10	10.5	Knoxville Hospital & Clinics	Knoxville	Iowa National Guard Armory	Knoxville		
64	10	10.5a	Knoxville Hospital & Clinics	Knoxville	VA Hospital	Knoxville	Alt Construction	
65	10	10.6	Madison County Health Care System	Winterset	On Net	Winterset	No Construction	
66	10	10.7	Mercy West Lakes	Des Moines	On Net	Des Moines	No Construction	
67	10	10.8	Iowa Hospital Association	Des Moines	On Net	Des Moines	No Construction	
68	10	10.9	Dallas County Hospital	Perry	Perry HS	Perry	No Construction	
69	11	11.1	Adair County Memorial Hospital	Greenfield	Greenfield HS	Greenfield		
70	11	11.2	Decatur County Hospital	Leon	Lamoni HS	Lamoni		
71	11	11.2a	Decatur County Hospital	Leon	Lamoni HS	Lamoni	Alternate Link/IRU Cost	
72	11	11.3	Ringgold County Hospital	Mt Ayr	Mount Ayr HS	Mt Ayr		
73	11	11.4	Alegent Heath Mercy Hospital	Corning	Corning HS	Corning		
74	11	11.5	Montgomery County Memorial Hospital	Red Oak	Southwestern CC	Red Oak		
75	11	11.6	Audubon County Memorial Hospital	Audubon	Audubon HS	Audubon		
76	12	12.1	Grape Community Hospital	Hamburg	Sidney HS	Sidney		
77	12	12.1a	Grape Community Hospital	Hamburg	Hamburg HS	Hamburg	Alternate Lateral Build	
78	12	12.1a	Hamburg HS	Hamburg	Sidney HS	Sidney	Alternate Link/IRU Cost	
79	12	12.2	Clarinda Regional Health Center	Clarinda	Iowa Western CC	Clarinda		
80	12	12.3	Shenandoah Medical Center	Shenandoah	Iowa National Guard Armory	Shenandoah		
81	12	12.4	Alegent Health Community Memorial Hospital	Missouri Valley	Missouri Valley HS	Missouri Valley		
82	12	12.5	Jennie Edmundson Hospital	Council Bluffs	Iowa Western CC	Council Bluffs		
83	12	12.6	Alegent Heath Mercy Hospital	Council Bluffs	Jennie Edmundson Hospital	Council Bluffs		

Vendor's Authorized Agent Signature: _____



BID SHEET – PART II

Line	Merged Area	SID	A Location - Hospital	City	Z Location - Endpoint	City	Notes	QA Bid Price
84	13	13.1	Horn Memorial Hospital	Ida Grove	Western Iowa Tech CC	Ida Grove		
85	13	13.2	Cherokee Regional Medical Center	Cherokee	Washington HS	Cherokee		
86	3	13.3	Crawford County Memorial Hospital	Denison	Intercept Splice - Temp	Denison		
87	13	13.4	Burgess Health Center	Onawa	Iowa National Guard Armory	Mapleton		
88	13	13.4a	Burgess Health Center	Onawa	West Monona HS	Onawa	Alternate Lateral Build	
89	13	13.4.a	West Monona HS	Onawa	Mapleton Valley HS	Mapleton	Alternate Link/IRU Cost	
90	13	13.5	Mercy Medical Center-Sioux City	Sioux City	Sioux City Transport Ctr.	Sioux City		
91	13	13.6	Floyd Valley Hospital	Le Mars	Gahlen Catholic HS	Le Mars		
92	14	14.1	Story County Medical Center	Nevada	Maint Splice 1107F-A	Ames		
93	14	14.1a	Story County Medical Center	Nevada	Meet Point	Nevada	Alternate Lateral Build	
94	14	14.1a	Meet Point	Nevada	Maint Splice 1107F-A	Ames	Alternate Link/IRU Cost	
95	14	14.2	Manning Regional Healthcare Center	Manning	St. Anthony Regional Hosp	Carroll		
96	14	14.2a	Manning Regional Healthcare Center	Manning	Manning HS	Manning	Alternate Lateral Build	
97	14	14.2a	Manning HS	Manning	DMACC Campus	Carroll	Alternate Link/IRU Cost	
98	14	14.3	Saint Anthony Regional Hospital	Carroll	DMACC Campus	Carroll		
99	14	14.4	Boone County Hospital	Boone	DMACC Campus	Boone		
100	15	15.1	Osceola Community Hospital	Sibley	Sibley HS	Sibley		
101	15	15.2	Orange City Area Health System	Orange City	Northwestern College	Orange City		
102	15	15.3	Baum-Harmon Mercy Hospital	Primghar	Northwest Iowa CC	Sheldon		
103	15	15.3a	Baum-Harmon Mercy Hospital	Primghar	South O'Brien HS	Paullina	Alternate Lateral Build	
104	15	15.3a	South O'Brien HS	Paullina	Northwest Iowa CC	Sheldon	Alternate Link/IRU Cost	
105	15	15.4	Sanford Sheldon Medical Center	Sheldon	Iowa National Guard Armory	Sheldon		
106	15	15.5	Hawarden Community Hospital	Hawarden	AEA 4	Sioux Center		
107	15	15.5a	Hawarden Community Hospital	Hawarden	Hawarden Library	Hawarden	Alternate Lateral Build	
108	15	15.5a	Hawarden Library	Hawarden	AEA 4	Sioux Center	Alternate Link/IRU Cost	
109	15	15.6	Sioux Center Community Hospital	Sioux Center	Iowa National Guard Armory	Sioux Center		

Vendor's Authorized Agent Signature: _____



BID SHEET – PART II

Line	Merged Area	SID	A Location - Hospital	City	Z Location - Endpoint	City	Notes	QA Bid Price
110	15	15.7	Hegg Memorial Health Center	Rock Valley	AEA 4	Sioux Center		
111	15	15.7a	Hegg Memorial Health Center	Rock Valley	Rock Valley HS	Rock Valley	Alternate Lateral Build	
112	15	15.7a	Rock Valley HS	Rock Valley	AEA 4	Sioux Center	Alternate Link/IRU Cost	
113	15	15.8	Merrill Pioneer Community Hospital	Rock Rapids	Central Lyon MS	Rock Rapids		
114	15	15.91	Avera Data Center	Sioux Falls, SD	IRU	Sheldon		
115	15	15.92	Sanford Hospital	Sioux Falls, SD	IRU	Sheldon		
116	16	16.1	Lakes Regional Healthcare	Spirit Lake	Spirit Lake HS/AEA 8	Spirit Lake		
117	16	16.2	Palo Alto County Hosp	Emmetsburg	Iowa Lakes CC	Emmetsburg		
118	16	16.3	Avera Holy Family	Estherville	Link Splice 69	Estherville		
119	16	16.4	Kossuth Regional Health Center	Algona	Iowa Lakes CC	Algona		
120	16	16.4a	Kossuth Regional Health Center	Algona	Bishop Garrigan HS	Algona	Alternate Lateral Build	
121	16	16.4a	Bishop Garrigan HS	Algona	Iowa Lakes CC	Algona	Alternate Link/IRU Cost	
122	16	16.5	Spencer Hospital	Spencer	Iowa Lakes CC	Spencer		
123	17	17.1	Hamilton Hospital	Webster City	Link Splice 30	Webster City		
124	17	17.2	Stewart Memorial Community Hospital	Lake City	Rockwell City HS	Rockwell City		
125	17	17.2a	Stewart Memorial Community Hospital	Lake City	Southern Cal HS	Lake City	Alternate Lateral Build	
126	17	17.2a	Southern Cal HS	Lake City	Rockwell City –Lytton HS	Rockwell City	Alternate Link/IRU Cost	
127	17	17.3	Wright Medical Center	Clarion	Iowa Central CC	Eagle Grove		
128	17	17.3a	Wright Medical Center	Clarion	Clarion-Goldfield MS	Clarion	Alternate Lateral Build	
129	17	17.3a	Clarion-Goldfield MS	Clarion	Iowa Central CC	Eagle Grove	Alternate Link/IRU Cost	

Vendor's Authorized Agent Signature: _____



ATTACHMENT 5 – PART I
INDEFEASIBLE RIGHT OF USE
RFP 08-001

1.0 "Indefeasible Right to Use" or "IRU" shall mean the exclusive, unrestricted, and indefeasible right to use the relevant Capacity (including equipment, fibers or capacity) for any legal purpose. The granting of such IRU does not convey title or legal ownership of any fibers on Vendors Network. The IRU shall convey an interest that notwithstanding the occurrence of a breach by the receiving party of any legal duty or obligation imposed by any contract, by the law of torts (including simple or gross negligence, strict liability or willful misconduct), or by federal or state laws, rules, regulations, orders, standards or ordinances, during the Term, the granting party shall have no right to revoke or restrict in any manner or to any degree whatsoever, through injunctive relief or otherwise, the use of the IRU granted to the receiving party, it being understood and agreed that each such breach shall be compensable, if at all, by a remedy at law and not at equity.

In locations where Vendors have existing fiber capacity, the IRHTP will consider the costs of a 20-year "Indefeasible Right to Use Agreement" for two dark fibers in lieu of a bid for construction.

The IRHTP is not bound to accept the offer of an IRU. The offered price will be considered against the costs of construction and how the inclusion of the IRU will affect the overall cost of a complete merged area or statewide bid award.

Each IRU shall be for one pair (2 dark fibers)

2.0 Vendor Information. Vendor shall furnish the following information pertaining to each IRU with its bid:

- 2.1 Closest point of entry for both the near end and the far end of each site-by-site segment being bid.
- 2.2 Cost of construction to connect IRU fiber terminations to near end and far end Fiber distribution panels (FDPs) or fiber termination bulkheads.
- 2.3 Total db loss for each IRU segment.
- 2.4 Vendor's agreement to specified hours for maintenance windows for future work to be done on fiber bundles containing IRU fibers, or where bundles are not separated, the whole sheath.
- 2.5 Vendor shall describe how service will be restored in the event of a fiber cut.
- 2.6 Vendor shall identify any known hazards along the IRU fiber route such as stream crossings or etc.
- 2.7 A copy of the Vendor's IRU contract document.
- 2.8 Vendor shall stipulate as to whether additional pairs of fibers are available on the same route.

ATTACHMENT 6
USAC RURAL HEALTH CARE PILOT PROGRAM PROCESS
RFP 08-001

Competitive Bidding Requirement Overview

The RHCPP Selection Order requires the selected participants to conduct a competitive bidding process to select the most cost-effective vendor for design, evaluation, and deployment of the broadband network. To satisfy the competitive bidding requirement, among other things, selected participants must submit an FCC Form 465 that includes a description of services for which the health care provider(s) is seeking support and wait at least 28 days from the date on which this information is posted on USAC's website before making commitments with the selected service provider.

Please also see the [Wireline Competition Bureau's Letter to Program Participants on December 20, 2007](#).

Please feel free to address any concerns to RHCPilot@usac.org or call 800-229-5476.

Vendor Eligibility

All vendors that provide services or equipment eligible for funding under the Pilot Program may submit bids for Pilot Program projects. To receive RHCPP support, vendors also need to obtain a Service Provider Identification Number (SPIN) from USAC.

All telecommunications providers, Internet service providers, and other vendors may receive up to 85% of eligible Pilot Program costs. Network design firms and various types of construction companies may also participate. Project participants may choose to self-provision for these services and/or equipment in that they may do their own design work and/or network deployment, subject to the FCC's competitive bidding requirements. This program will refer to all of these entities collectively as Vendors.

Eligible Pilot Program costs include, but are not limited to:

- the non-recurring costs for design, engineering, materials, and construction of fiber facilities and other broadband infrastructure;
- the non-recurring costs of engineering, furnishing (i.e., as delivered from the manufacturer), and installing network equipment;
- the recurring and non-recurring costs of operating and maintaining the constructed network once the network is operational; and
- carrier-provided transmission services and the costs for subscribing to such facilities and services.

All vendors that supply these services or equipment may submit bids for Pilot Program projects. Vendors interested in submitting bids should familiarize themselves with the [2007 Rural Health Care Pilot Program Selection Order](#), which details the RHCPP network components eligible and ineligible for support. Additional information concerning the Pilot Program is available on the [FCC's Rural Health Care Pilot Program page](#).

All vendors (including self-provisioning project entities) must have a Service Provider Identification Number (SPIN), issued by USAC, to receive support for providing discounted service and equipment to eligible RHCPP project participants. If a vendor already has a SPIN, this number is good for all USF programs including the RHCPP. Vendors must ensure they have completed Box 8 of FCC Form 498. Vendors may edit this form if they have already obtained a SPIN. For questions concerning eligibility, please call the Rural Health Care Call Center at 1-800-229-5476. For questions about obtaining a SPIN, please contact [Client Services Bureau](#) at 1-888-641-8722. Vendors that need to apply for a SPIN can go to USAC's [E-File](#) page.



Prior to receiving any RHCPP support, all vendors must complete a certification stating they will comply with RHCPP rules and use funding only for the purposes intended. A sample template of this certification is available for download. This certification should be submitted to the Project Coordinator.

Searching service requests or Request for Proposal (Online)

To search for and view Pilot Program service requests (e.g., RFP) postings, vendors will go directly to the RHCPP website [search postings](#) page.

Rural Health Care Pilot Program Project Detail

Vendors may view the posted service requests (e.g., RFP) and associated documents on the [Search Postings](#) page of the RHCPP website. Posted information includes:

- Services requested in PDF Format (e.g., RFP)
- Participating entities/HCPs
- Project Coordinator's name, location, and contact information
- Date Posted to USAC website
- Allowable Contract Date

Provide bids for requested service

After USAC posts a RHCPP Project's *Description of Services Requested & Certification Form* (Form 465) and associated supporting information, all vendors may view the information and provide bids.

The open competitive bidding process is a minimum of 28 days from the date USAC posts a Form 465 on USAC's website. During this minimum 28-day window, vendors may contact the Project Coordinator (or alternate point of contact (POC), if specified) to submit a bid for their service needs. RHCPP Participants must evaluate all bids and select the most cost-effective service or facility provider available. In selecting the most cost-effective bid, in addition to price, the FCC's [2007 Rural Health Care Pilot Program Selection Order](#) requires Participants to consider non-cost evaluation factors that include prior experience, including past performance; personnel qualifications, including technical excellence; management capability, including solicitation compliance; and environmental objectives (if appropriate). Additional discussion of the cost effective standard can be found in paragraphs 78 to 79 of the [2007 Rural Health Care Pilot Program Selection Order](#). Project Coordinators may conduct bidding rounds that exceed 28 days and may have multiple rounds of selection.

Vendors can search for requests for services on the RHCPP [Search Postings](#) page.

NOTE: Vendors or service providers participating in the competitive bid process are prohibited from assisting with or filling out a selected participants' service request (e.g., FCC Form 465 and related materials).

Sign a contract for service

Vendors may enter into a contract with Participants after the minimum 28-day posting requirement has been met.

It is the Participant's responsibility to determine the most cost-effective service and select an eligible vendor before signing a contract. **Participants that enter into an agreement before completion of the 28-day posting requirement are in violation of the FCC's competitive bidding rules for the Rural Health Care Pilot Program and will not receive support.**

In addition:



- (1) Vendors participating in competitive bidding process are prohibited from assisting or filling out the RHCPP Participant's Form 465 – see footnote 281 of the [2007 RHCPP Selection Order](#).
- (2) Vendors must complete an RHCPP certification. This requirement is found in paragraph 93 of the [2007 RHCPP Selection Order](#). The template for this certification is available for [download](#).
- (3) Vendors must retain records for 5 years. This requirement is stated in footnote 277 of the [2007 RHCPP Selection Order](#).

Receive Funding Commitment Letter

When USAC has approved a request for service support (the *Internet Service Funding Request and Certification Form 466-A*, and associated attachments), USAC will send the Project Coordinator and the vendor a Funding Commitment Letter (FCL).

The FCL indicates that the project is eligible for the support specified in the letter contingent upon submitting a *Connection Certification Form* (Form 467).

Funding Commitment Letter Contents

The FCL includes the following information:

- Health Care Provider (HCP) Number, a unique five-digit code assigned to each Pilot project
- HCP Contact Name (person designated as the Project Coordinator)
- HCP Name and Address of the project location supported
- Service Provider Identification Number (SPIN)
- Vendor Name
- Funding Year
- Copy of Approved Network Cost Worksheet
- List of sites where service is being provided
- Type of Service Agreement (e.g., contract, tariff)
- Eligible Support Start Date: first date the project can receive support based on the *Description of Services Requested & Certification Form* (Form 465)
- Support End Date, last day service is eligible for support during the funding year
- Estimated Months of Support
- Non-Recurring Support Amount
- Monthly Recurring Support Amount
- Estimated Total Support Amount
- Funding Request Number, a unique five-digit code assigned by USAC for each project, vendor, and service combination.
- Approved Network Cost Worksheet Items

What to Do When You Receive the FCL

Vendors should validate the SPIN on the FCL. This ensures that future support provided by the vendor is credited to the correct SPIN. If the SPIN is incorrect, please contact the Rural Health Care Pilot Program at 1-800-229-5476.



Health care provider support can only be provided after the vendor receives the Support Acknowledgement Letter from USAC.

Receive Support Acknowledgement Letter

USAC sends a [Support Acknowledgment Letter to the Project Coordinator \(PC\) and vendor](#).

After receiving the *Connection Certification Form* (Form 467), USAC creates a Support Acknowledgement Letter, which is sent to the PC and vendor.

The Support Acknowledgement Letter provides a detailed report of the approved service(s) and support information.

Health Care Provider (HCP) Support Acknowledgement Letter Contents

The HCP Support Acknowledgement Letter includes the following information:

- Funding Year: 2007, 2008, etc.
- Pilot Project Number (Also known as a HCP Number): unique five-digit number assigned to each Pilot Project
- Funding Request Number: a unique five-digit code assigned by USAC for each Pilot Project, vendor and service combination.
- Billing Account Number: account code for a Pilot Project credited with USF support
- Pilot Project Name: name of project being supported
- Pilot Project Address: address of the project being supported
- Pilot Project Mailing Organization and Address if different than above
- Service Provider Identification Number (SPIN) – number issued by USAC to a vendor
- Vendor name: name of vendor providing service or equipment to project
- Service: type of service or equipment provided
- Support Start Date: first date HCP can receive support based on the *Description of Services Requested & Certification Form* (Form 465)
- Support End Date: last day service is eligible for support during the funding year
- Support Date: month and year for support amount
- Support Amount: support for the month (\$)
- Total: total support for the funding year (\$)

This letter verifies that a Form 467 has been received. The support is credited to the Billing Account Number shown on the Support Acknowledgement Letter. A sample [Support Acknowledgement Letter](#) is available for download.

What to Do When You Receive the Support Acknowledgement Letter

The Support Acknowledgement Letter will be sent to the PC and vendor when the *Connection Certification Form* (FCC Form 467) is processed by USAC.

Once the vendor receives the letter, it can bill the project for services completed. The entity that receives the bill and pays for the service is defined as the "billed entity."

USAC requests that vendors check the SPIN on the Support Acknowledgement Letter to make sure it is correct.

Participants should check that the service provided was actually working or installed and is being billed for the time period on the Support Acknowledgement Letter. Be sure that the Billing Account Number listed on the letter is the same Billing Account Number attached to the service and PC location or PC mailing organization and address. This ensures support is credited to the entity paying for the service. If you are unsure whether the Billing Account Number is correct or if you find an error on the Support Acknowledgement Letter, please contact the Rural Health Care Pilot Program at 1-800-229-5476 and do not start applying program discounts.

Send invoice to USAC

Once the vendor provides the service and invoices the project, the Project Coordinator (PC) for each Pilot Project is responsible for approving invoices for the vendor's use. These invoices are based on the approved Funding Commitment Letter. The vendor then signs and returns these pre-filled invoices to USAC.

The Project Coordinator shall also confirm and demonstrate to USAC that the selected participant's 15 percent minimum funding contribution has been provided to the service provider for each invoice. USAC also will review invoices to ensure network deployments are proceeding according to the Participants' network plans.

Where and When to Send Invoices

Project Coordinators can mail or fax USAC a copy of the [RHCPP Invoice](#):

Universal Service Administrative Company
Rural Health Care Program
100 S. Jefferson Road
Whippany, NJ 07981

Fax Number: 973-599-6514 (to the attention of the project coach)

Bi-Monthly Invoicing Cycle

Invoices received from the 1st through the 15th of the month will be processed by the 20th of the month. Invoices received from the 16th through the 31st of the month will be processed by the 5th of the following month.

Example

If an invoice is received January 29 it will be processed during the first five days of February. If an invoice is received February 1, it will be processed by February 20. The date the invoice is received by USAC will be used to determine when the invoice will be processed, not the date mailed by the project coordinator. Once an invoice is processed by USAC, it will take about 10 days to issue payment. If payment has not been received within 45 days of invoicing USAC, please call 1-800-229-5476 to be sure the invoice was received and is being processed.

Invoice Formatting

USAC has designed a sample invoice format that project coordinators and vendors may use in the RHCPP. The [RHCPP Invoice](#) consists of a header and individual invoice line items for each Pilot Program service credited. Support amounts are based on monthly submissions of actual incurred expenses.

Note

USAC has developed an administrative process to streamline the invoice submission and approval process. Please contact the Project Coordinator for additional information on this process.



Vendor Letterhead

Certification of [Vendor]

I, _____[name of corporate officer], on behalf of
_____ [Vendor name] (SPIN _____) certify and swear under the penalty of
perjury, that to the best of my knowledge, information and belief, all federal Rural Health
Care Pilot Program support provided to us will be used only for eligible Pilot Program
purposes for which the support is intended, as described in the Pilot Program Order (WC
Docket 02-60; FCC 07-498, released November 19, 2007), and consistent with related FCC
orders, section 254(h)(2)(A) of the Telecommunications Act of 1934, as amended, and
Parts 54.601 *et. seq.* of the FCC's rules.

(signature)

Name

Title

Date

NOTARIZED BY:



ATTACHMENT 9

**NOTICE TO VENDORS
REQUEST FOR PROPOSAL
IRHTP RFP 09-002**

**Outside Plant Quality Assurance
Inspection Services at 82 Health
Care Locations Throughout the
State of Iowa**

**Mr. Art Spies
Senior Vice President
Iowa Hospital Association
100 East Grand Avenue, Suite 100
Des Moines, IA 50309
spies@ihaonline.org**

**The Iowa Rural Health Telecommunications
Program (IRHTP) will be receiving sealed
bid proposals for RFP 09-002 until the 29th
day following posting of the RFP
3:00 p.m. CDST, August 6, 2009.**



**Healthcare
without limits™
faster
more reliable
co\$t effective**

SUPPLEMENTAL ON-DEMAND QUALITY ASSURANCE INSPECTION SERVICES

RFP 09-002

THIS REQUEST FOR PROPOSAL CONSISTS OF:

Chapter 1 Administrative Issues	P 3
Chapter 2 Contractual Terms	P 10
Chapter 3 Technical Specifications	P 12
Chapter 4 Attachments	
Annex A – RFP 09-002 Cost Submittal Sheet	P 20
Annex B - List of Participating HCP's	P 21
Annex C - Bid Proposal Compliance Form	P 24
Annex D – Authorization to Release Information	P 25
Annex E - Vendor Certification Form	P 26
Annex F – Quality Assurance Evaluation Criteria	P 27
Annex G - Detailed Outside Plant Installation Specification	P 29
Annex H – Contractual Terms & Conditions	
Quality Assurance Sample Agreement	P 91
Annex I - Link Segment Completion Checklist	P 108
Annex J – Spin Number Requirement	P 109
Annex K - USAC Competitive Bidding Process	P 110

RFP 08-001 available on CD per request (for reference only)

CHAPTER 1
ADMINISTRATIVE ISSUES
RFP 09-002

1.0 General. The Rural Health Care Program of the Universal Service Fund (USF), which is administered by the Universal Service Administrative Company (USAC), is a support program authorized by Congress and designed by the Federal Communications Commission (FCC) to provide reduced rates to rural health care providers (HCPs) for telecommunications services and Internet access charges related to the use of telemedicine & tele-health. The Iowa Rural Health Telecommunications Program (IRHTP) and the Iowa Hospital Association (IHA) received approval to proceed with the connection of various Iowa hospitals to the Iowa Communications Network using newly constructed or existing fiber optic cable facilities. IRHTP is seeking bid proposals for supplemental on-demand quality assurance inspection services in support of an Outside Plant Fiber Optic Cable Project at 85 health care locations throughout the State of Iowa.

1.1 Notice. This project is subject to the USAC procurement rules. The IRHTP will submit a USAC Form 465, RFP, and supporting documentation to USAC who will review the documentation and will post the RFP on the USAC website. All RFPs will be open for response and bidding for a minimum of twenty eight (28) days after the posting. After documents are posted to the USAC website, the following process will commence:

1.2 Schedule and Submission of Proposal.

1.2.1 Questions and Answers. Vendors are invited to submit written questions and/or requests for interpretation/consideration/acceptance concerning this RFP on or before 4:00 p.m. CDST, July 17, 2009. Vendors with questions concerning this RFP may submit questions in writing via email to Art Spies at spiesa@ihaonline.org. Oral questions will not be accepted, and verbal communications shall not override written communications. Only written communications are binding on IRHTP. If the questions, requests for clarifications, or suggestions pertain to a specific section of the RFP, the page and section number(s) must be referenced. IRHTP will prepare a written response to all pertinent questions submitted by Vendors and will post questions and responses on the Iowa Hospital Association web page, www.ihaonline.org by the close of business on July 24, 2009. The IRHTP's written responses will be considered part of the RFP. If the IRHTP decides to adopt a suggestion, the IRHTP will issue an amendment to the RFP.

1.2.2 The IRHTP assumes no responsibility for verbal representations made by its consortium members and representatives unless such representations are confirmed in writing by the IRHTP and incorporated into this RFP.

1.2.3 Changes and Amendments. In the event it becomes necessary for IRHTP to amend, add to or delete any part of this RFP, the amendment will be posted on the IHA website. Vendor's bid proposal must include acknowledgment of all addenda issued by IRHTP. If the IRHTP amends the RFP after the closing date of receipt of proposals, the IRHTP may, in its sole discretion, allow Vendors to amend their bid proposals in response to the IRHTP's amendment.

1.2.4 Receipt of Bid Proposals. Bid Proposals must be received at IHA's office by the 29th day following posting of the RFP, no later than 3:00 p.m. CDST August 6, 2009. **This requirement is**

a mandatory requirement and is not a minor deficiency subject to waiver by the IRHTP. No bid proposals will be accepted after the date and time specified. A late bid proposal shall be returned unopened to the Vendor. Additionally, no bid proposal will be accepted by telephone, electronic mail or facsimile. **The bid proposals must be mailed (with mailing in sufficient time to arrive on or before this deadline requirement) or be delivered as follows:**

Mailing Address:
Iowa Hospital Association
Attn: Mr. Art Spies
100 East Grand Ave. Suite 100
Des Moines, Iowa 50309

Delivery To:
Iowa Hospital Association
Attn: Mr. Art Spies
100 East Grand Ave. Suite 100
Des Moines, Iowa 50309

If bid proposals are delivered by mail service, express courier, delivery service or company, or in person, it shall be the sole responsibility of the Vendor submitting the proposal to insure that such delivery takes place prior to the aforementioned deadline. There shall be no waiving of the deadline due to missed deliveries on the part of the Vendor, Vendor's delivery staff or Vendor's choice of delivery service(s). Deliveries made directly to IHA must be placed with the IHA staff person able to accept such delivery.

1.2.5 Bid Proposal Opening. Bid Proposals will be opened at 3:00 p.m. CDST on August 6, 2009. Vendors may attend the bid opening if they wish, but no price information or any other information contained in any bid will be made public at that time. The bid proposals and the evaluation documents created by the IRHTP will remain confidential until the evaluation committee has evaluated all bid proposals submitted in response to this RFP and the IRHTP has issued a notice of award. The bid proposals submitted and the evaluation documents created by the IRHTP may be available for inspection subject to FCC and USAC guidelines or other applicable law only after the selection process is complete.

1.2.5.1 Failure to comply with or supply any and all information requested to accompany bid proposals may be cause for rejection of the proposal as non-compliant.

1.2.5.2 All bid proposals shall be firm for a period of 60 days to allow the evaluation committee to fully evaluate all proposals and make an award deemed to be in the best interest of IRHTP.

1.2.5.3 By submitting a bid proposal the Vendor agrees to the terms and conditions contained within this RFP.

1.3 Proposal Submission & Format.

1.3.1 Bid Proposals shall be printed on 8.5" x 11" paper. The proposals should be in 3-ring binders with appropriate tabs for reference. The original bid proposal must be in a package **CLEARLY MARKED "IRHTP RFP 09-002 Proposal"** on the outer envelope or wrapping. This is necessary to insure that the response package is handled properly for verification against the RFP deadline. Lack of notation of the RFP number may affect the receipt timing and affect the evaluation process. Vendor should consider this item as a critical factor when submitting a response.

1.3.2 To achieve a uniform review process and the maximum degree of comparability, proposals shall be organized in the following manner:

1.3.2.1 **Title page** that includes the subject of the bid proposal, the RFP number being responded to (**09-002**), name of Vendor, address, name of designated contact person, telephone number, facsimile telephone number, E-mail address for Vendor's contact person (and, if applicable, the cellular telephone number of contact person) and the date.

1.3.2.2 **Completed Bid Proposal Compliance Form (Annex C)**

1.3.2.3 **Completed Authorization to Release Information Form (Annex D)**

1.3.2.4 **Completed Vendor Certification Form (Annex E)**

1.3.2.5 **Completed and signed Cost Submittal Sheet (Annex A)**

1.3.3 **Number of Copies.** Vendors shall submit one (1) with original blue-ink signatures and three (3) copies; in addition four (4) soft copies of the bid proposal shall be provided on (4) CDs using Microsoft Word and Excel, if proposal contains spreadsheets.

1.4 Clarification of Proposals and Obtaining Information. IRHTP reserves the right to contact a Vendor after submission of bid proposals for the purpose of clarifying a bid proposal to ensure mutual understanding. This contact may include written questions, interviews, site visits, and a review of past performance if the Vendor has provided goods or services to the IRHTP or its consortium members, USAC, or the ICN or requests for corrective pages in the Vendor's bid proposal. This information may be used to evaluate the Vendor's bid proposal. However, the information received from the Vendor shall not be considered in the evaluation of a Vendor's bid proposal if the information materially alters the content of the bid proposal. IRHTP reserves the right to obtain information concerning any Vendor or any proposal from any source and to consider such information in evaluating the Vendor's bid proposal.

1.5 Waiver of Deficiencies. IRHTP reserves the right to waive minor deficiencies in a bid proposal if, in the judgment of IRHTP, the consortium's best interest will be served. The decision as to whether a deficiency will be waived or will require the rejection of a bid proposal will be solely within the discretion of IRHTP. There is no guarantee or assurance that any deficiency will be deemed minor and that a deficiency will be waived. Each Vendor is specifically notified that failure to comply with or respond to any part of this RFP requiring a response may result in rejection of the bid proposal as not responsive.

1.6 Cost of Bid Proposal. IRHTP is not responsible for any costs incurred by a Vendor, which are related to the preparation or delivery of the bid proposal, or any other activities carried out by the Vendor as it relates to this RFP. The costs of preparation and delivery of the bid proposal are solely the responsibility of the Vendor.

1.7 Bid Proposal Obligations. The contents of the bid proposal and any clarification thereto submitted by the successful Vendor shall become part of the contractual obligation and incorporated by reference into the ensuing Contract.

1.8 Bid Proposals Property of IRHTP. Except as otherwise stated herein, all bid proposals become the property of the IRHTP and shall not be returned to the Vendor unless all bid proposals are rejected. In the event all bid proposals are rejected, Vendors will be asked to send prepaid shipping instruments to the IRHTP for return of the bid proposals submitted. In the event no shipping instruments are received by the IRHTP, the bid proposals will be destroyed by the

IRHTP. Additionally, the evaluation documents created the IRHTP will be destroyed in the event all bid proposals are rejected. Otherwise, at the conclusion of the selection process, the contents of all bid proposals may be placed in the public domain and be opened to inspection by interested parties subject to appropriate FCC, USAC, and federal procurement regulations.

1.9 Rejection and Disqualification of Bid Proposals.

1.9.1 IRHTP reserves the right to reject any and all bid proposals, in whole and in part, received in response to this RFP at any time prior to the execution of a written Contract. Issuance of this RFP in no way constitutes a commitment by IRHTP to award the Contract. This RFP is designed to provide Vendors with the information necessary for the preparation of competitive bid proposals. This RFP process is for IRHTP's benefit and is intended to provide IRHTP with competitive information to assist in the selection of goods and services.

1.9.2 The IRHTP may reject a bid proposal outright and not evaluate the proposal for any one (1) of the following reasons:

1.9.2.1 Failure of Vendor to deliver the bid proposal by the due date and time.

1.9.2.2 Failure to include the Bid Proposal Compliance Form signed by an officer of the Vendor submitting the bid proposal. (Annex C)

1.9.2.3 Failure to include the Authorization to Release Information Form (Annex D)

1.9.2.4 Failure to include a completed Vendor Certification Form (Annex E)

1.9.2.5 The Vendor states that a technical requirement cannot be met.

1.9.2.6 The Vendor's response materially changes a technical requirement.

1.9.2.7 The Vendor's response limits the rights of the IRHTP.

1.9.2.8 The Vendor fails to respond to the IRHTP's request for information, documents, or references.

1.9.2.9 The Vendor's exceptions to the contract terms and conditions described in Chapter 2 and Annex H (Contractual Terms and Conditions) materially changes the terms and conditions of that section or the requirements of this RFP.

1.9.2.10 The Vendor provides misleading or inaccurate responses.

1.9.2.11 The Vendor's proposal is materially unbalanced.

1.9.2.12 The Vendor fails to submit a completed and signed Cost Submittal Sheet (Annex A)

1.10 Public Records and Requests for Confidentiality.

1.10.1 The release of information by IRHTP to the public is subject to appropriate FCC, USAC, federal procurement regulations, and other applicable provisions of law relating to the release of records in the possession of the IRHTP. Vendors are encouraged to familiarize themselves with these provisions prior to submitting a bid proposal. All information submitted by a Vendor may be treated as public information by IRHTP unless the Vendor properly requests that information be treated as confidential at the time of submitting the bid proposal. **In the event the Vendor marks each page of its bid proposal as proprietary or confidential without adhering to the requirements of this Section, the IRHTP may reject the bid proposal as noncompliant.**

1.10.2 Any requests for confidential treatment of information must be included in a cover letter with the Vendor's bid proposal and must enumerate the specific grounds which support treatment of the material as confidential and must indicate why disclosure is not in the best interests of the public. The request must also include the name, address and telephone number of the person

authorized by the Vendor to respond to any inquiries by IRHTP concerning the confidential status of the materials.

1.10.3 Any documents submitted which contain confidential information must be marked on the outside as containing confidential information, and each page upon which confidential information appears must be marked as containing confidential information. The confidential information must be clearly identifiable to the reader wherever it appears. All copies of the proposal submitted, as well as the original proposal, must be marked in this manner. **Failure to properly mark information as confidential shall relieve the IRHTP from any responsibility if the information is viewed by the public, a competitor, or is any way accidentally released.**

1.10.4 In addition to marking the material as confidential material where it appears, the Vendor must submit one (1) hard copy (printed) of the bid proposal from which the confidential information has been excised. This hard copy of the proposal **MUST** be clearly marked as “Excluding Confidential Materials”. In addition to a hard copy, the Vendor must also include an electronic copy of the nonconfidential portions of the proposal on CD-ROM using Microsoft Word and Excel as appropriate. The confidential material must be excised in such a way as to allow the public to determine the general nature of the material removed and to retain as much of the document as possible. The excised version must be submitted with the cover letter and may be made available for public inspection. This submittal is a mandatory requirement and is not subject to waiver. Failure to mark the confidential items and to provide the required one (1) copy with confidential information excised shall be defined as allowance for the entire proposal to be treated as a public record.

1.10.5 The Vendor’s failure to request in the bid proposal confidential treatment of material pursuant to this Section and the relevant laws and administrative rules will be deemed by IRHTP as a waiver of any right to confidentiality which the Vendor may have had.

1.11 Restrictions on Gifts and Activities. No gifts or other activities will be accepted.

1.12 Restriction on Communication. Vendors should funnel all communications thru the IRHTP Project Coordinator in order to receive the highest quality response from the consortium. Please refer to Chapter 1, sections 1.2.1 and 1.2.2 regarding questions and answers.

1.13 Nonmaterial and Material Variances. The IRHTP reserves the right to waive or permit cure of nonmaterial variances in the bid proposal if, in the judgment of the IRHTP, it is in the IRHTP’s best interest to do so. Nonmaterial variances include minor informalities that do not affect responsiveness; that are merely a matter of form or format; that do not change the relative standing or otherwise prejudice other Vendors; that do not change the meaning or scope of the RFP; or that do not reflect a material change in the services. In the event the IRHTP waives or permits cure of nonmaterial variances, such waiver or cure will not modify the RFP requirements or excuse the Vendor from full compliance with RFP specifications or other contract requirements if the Vendor is awarded the contract. The determination of materiality is in the sole discretion of the IRHTP.

1.14 Copyrights. By submitting a bid proposal, the Vendor agrees that IRHTP may copy the bid proposal for purposes of facilitating the evaluation or to respond to requests for public records. The Vendor consents to such copying by submitting a proposal and warrants that such copying

will not violate the rights of any third party. IRHTP will have the right to use ideas or adaptations of ideas, which are presented in the proposals. In the event the Vendor copyrights the bid proposal, the IRHTP may reject the bid proposal as noncompliant.

1.15 Conflict Between Terms. IRHTP reserves the right to accept or reject any exception taken by the Vendor to the terms and conditions of this RFP. Substantial variations between the Vendor's terms and conditions and those contained in this RFP may be grounds for rejection of the Vendor's bid proposal as non-responsive and non-compliant.

1.16 Release of Claims. With the submission of a bid proposal, Vendor agrees that it will not bring any claim or have any cause of action against IRHTP or its consortium members based on any misunderstanding concerning the information provided herein or concerning IRHTP's failure, negligent or otherwise, to provide the Vendor with pertinent information as intended by this RFP.

1.17 Construction of RFP with Laws and Rules. Changes in applicable laws and rules may affect the award process or the resulting Contract. Vendors are responsible for ascertaining pertinent legal requirements and restrictions. Vendors are encouraged to visit the USAC Rural Health Care Pilot Project website: <http://www.usac.org/rhc-pilot-program> and the FCC website, <http://www.fcc.gov/cgb/rural/rhcp.html#orders>.

1.18 RFP Copy. Copies of the RFP will be available on the USAC Rural Health Care Pilot Program web site at <http://www.usac.org/rhc-pilot-program/tools/search-postings.aspx>. In addition the RFP will also be available to vendors via the Iowa Hospital Association web site at <http://www.ihaonline.org>. Vendors may also request an electronic copy of the RFP by contacting Art Spies at spiesa@ihaonline.org.

1.19 Downloading RFP from the Internet. The RFP, Amendments, and all responses to Vendor questions will be posted on the Iowa Hospital Association web site at <http://www.ihaonline.org>. Vendors are advised to check the IHA website periodically for amendments to this RFP as Vendors will not automatically receive Amendments and responses.

1.20 Definition of Contract. The full execution of a written contract shall constitute the making of a contract for services and no Vendor shall acquire any legal or equitable rights relative to the contract services until the Contract has been fully executed by the successful Vendor and the IRHTP.

1.21 Award Notice and Acceptance Period. The IRHTP will send an "Award Notice" to all Vendors submitting a timely bid proposal. Negotiation and acceptance of the contracts shall be completed with the successful Vendor no later than sixty (60) days after the Award Notice. If an apparent successful Vendor fails to negotiate and deliver the executed contract by that date, the IRHTP may, in its sole discretion, cancel the award and award the contract to the next highest ranked Vendor. The IRHTP reserves the right to continue negotiations after sixty days if, in IRHTP's sole discretion, IRHTP deems it to be in the best interests of IRHTP to do so.

1.22 Criminal History and Background Investigation. The IRHTP reserves the right to conduct criminal history and other background investigations of the Vendor, its officers, directors, shareholders, or partners and personnel retained by the Vendor for the performance of the Contract.

1.23 Suspension and Debarment. IRHTTP may review all vendors responding to this RFP to validate them against the FCC's Suspension and Disbarment list

<http://universalservice.org/sl/about/suspensionsdebarments.aspx>,

Persons who have been convicted of criminal violations or held civilly liable for certain acts arising from their participation in the Schools and Libraries Support Mechanism are subject to suspension and debarment from the program. FCC rules provide that there are two stages to this process. First, when the FCC becomes aware that a person has been convicted of a crime or judged civilly liable for certain acts arising out of that person's participation in the program, the FCC suspends that person from activities related to the program. The FCC issues a public Notice of Suspension and of Proposed Debarment. The notice of suspension informs the suspended person or other interested party that they have 30 days to oppose the proposed debarment. The second stage of this process is the actual debarment. The FCC will, absent extraordinary circumstances, provide notice of a decision to debar within 90 days of receiving any information from the person proposed for debarment

CHAPTER 2

CONTRACTUAL TERMS

RFP 09-002

2.1 Contractual Terms Generally.

2.1.1 The Contract, which the IRHTP expects to award, will be based upon the bid proposal submitted by the successful Vendor (Vendor awarded the Contract) and this solicitation. The Contract between the IRHTP and the Vendor shall be a combination of the specifications, terms and conditions of the Request for Proposal, including those contained in the contract terms and conditions sample agreement identified as Annex H, (Contractual Terms and Conditions), the offer of the Vendor contained in its bid proposal, written clarifications or changes made in accordance with the provisions herein, and any other terms deemed necessary by the IRHTP.

2.1.2 The Contract terms contained in Annex H (Contractual Terms and Conditions) are not intended to be a complete listing of all Contract terms but are provided only to enable Vendors to better evaluate the costs associated with the RFP and the potential resulting Contract. Vendors should plan on such terms being included in any Contract awarded as a result of this RFP. All costs associated with complying with these requirements should be included in any pricing quoted by the Vendor.

2.1.3 By submitting a bid proposal, each Vendor acknowledges its acceptance of these specifications, terms and conditions without change except as otherwise expressly stated in the appropriate section of the Bid Proposal Compliance Form (Annex C) If a Vendor takes exception to a provision, it must state the reason for the exception and set forth in Annex C of its bid proposal the specific Contract language it proposes to include in place of the provision. Exceptions that materially change these terms or the requirements of the RFP may be deemed nonresponsive by the IRHTP, in its sole discretion, resulting in possible disqualification of the bid proposal. The IRHTP reserves the right to either award a Contract without further negotiation with the successful Vendor or to negotiate Contract terms with the selected Vendor if the best interests of the IRHTP would be served.

2.2 Additional Cost Items Not In Contract. IRHTP is unaware of any additional Contract terms that would add cost. Notwithstanding, should any Contract items arise that would cost additional monies; those costs shall be borne by the Vendor.

2.3 Fiber Optic Cable Installation Schedule. The actual fiber optic cable installation schedule shall be as agreed upon between the successful OSP Vendor responding to IRHTP RFP 08-001 and the IRHTP Project Coordinator. The IRHTP will closely coordinate with the winning Quality Assurance Vendor to ensure maximum efficiency of the field inspectors time on site.

2.4 Additional Vendor Information. The FCC's Fourteenth Order on Reconsideration (CC Docket No. 96-45, FCC 99-256, 11/3/1999) stipulated that telecommunications carriers are no longer required to be Eligible Telecommunications Carriers (ETC's) to participate in this program. All non-traditional telecommunications service providers may participate. Service providers intending on responding to this RFP must secure a Service Providers Identification Number (SPIN) from USAC. See the USAC website for details on how to secure a SPIN.

2.5 Bid Proposal Security & Performance Bond. Not Required

2.6 Vendor must acquire USAC SPIN and provide on Bid Proposal Compliance Form

2.7 Debarment, Suspension and Other Responsibility Matters. The Vendor and all of its subcontractors shall certify that the company or corporation is not presently, or within the last three years, debarred, suspended, proposed for suspension, declared ineligible, or excluded from covered transactions by any government agency; or has not been reported to or questioned by a consumer protection office regarding its business practices; or it or its officers or directors are not presently or within the last three years, indicted for or otherwise criminally or civilly charged by a government entity for the commission of a public offense related to its business; or has not, within the last three years, had any government transactions terminated for cause or default; or within the last three years, has been terminated from or denied extension of a contract for any of the reasons above in addition to the Vendor's failure to maintain compliance of contract specifications or has failed to bargain or negotiate in good faith, conflicts not clearly specified or contained in the contract.

CHAPTER 3

TECHNICAL SPECIFICATIONS

RFP 09-002

Reference: See IRHTP RFP 08-001 Outside Plant Fiber Optic Cable Project at up to 92 Health Care Locations Throughout the State of Iowa

Notice: Part II – Quality Assurance Inspection Services of the aforementioned IRHTP RFP 08-001 is cancelled and is replaced with this IRHTP RFP 09-002

3.0 Overview of Project Responsibilities

3.1 Background and General Information. The IRHTP is soliciting a vendor to provide supplemental on-demand Quality Assurance Inspection Services (QAIS) in the field to oversee the quality control of OSP contractor(s) installing the fiber optic facilities requested under IRHTP RFP 08-001.

Over the next three calendar years (**2009-2011**), fiber optic facilities will be constructed in 66 locations throughout the State of Iowa. The fiber optic cable facility construction projects range in length from 1000 feet to 22 miles. The preponderance of the projects is less than five miles in length.

There are an additional nineteen (16) sites with fiber that are already on net or are utilizing IRUs for access and are for the purposes of this RFP considered on-net.

These Quality Assurance Inspections services are supplemental and are additional to the QAIS normally performed by the Iowa Communication Network who owns the backbone infrastructure to which this fiber attaches. The QAIS supplied by a vendor awarded a contract as a result of this RFP will be supportive in the form of augmentation services to the ICN Outside Plant Section and the ICN Outside Plant Manager.

In general terms, the services to be provided under this RFP are for Quality Assurance in the form of “spot-checking”, problem resolution, and site coordination and completing the link-segment checklists.

Site Inspectors may oversee multiple projects concurrently.

Due to the nature of the many unknowns relating to the actual schedule of construction, and to provide a level playing field for bid response evaluation, a **model for bidding purposes** is provided as Annex A to this document.

All supporting costs (such as per diem and travel, communications, and administration) for the deployment of the site inspectors under this RFP 09-002 must be determined and included in an hourly rate, hereinafter referred to as the “burdened hourly rate.”

This “burdened hourly rate.” is then applied to the cost models and submitted on the Annex A- (Cost Submittal Sheet) attached.

The “burdened hourly rate.” For Cost Model Number two can be different a different rate than that for Cost model Number One.

The calculated costs will result in a “firm fixed fee” for the specified number of hours in the cost models to be accomplished over the three-year project ending Dec 2011.

The selection of the Vendor for this RFP will be based on the Vendors understanding of the project, the vendor's qualifications, and the cost submitted on the Annex A - Cost Submittal Sheet. (See Annex F – Vendor Evaluation Criteria)

Upon award of a contract, the IRHTP Project Coordinator will negotiate the terms of payment based on a USAC Network Cost Worksheet, which will be jointly formulated by the IRHTP Project Coordinator and the vendor.

Upon award of a contract under this RFP, the ICN Outside Plant Manager (ICNOSPM) will negotiate mutually agreeable rules of engagement with the successful vendor. The model is for bidding purposes and the actual deployment for any particular project will be adjusted by the ICNOSPM based on the prevailing need.

The ICOSPM, will when making assignments to the Site Inspectors, work with the vendor to maximize the efficiency of time and travel.

All contracted hours will be used. Hours not used at one site will be used at other sites as needed.

Due to the nature of the funding of this project, no additional hours can or will be authorized. When the total numbers of hours are used, the vendor will be released from further obligation and the contract will be deemed complete.

3.2 Estimated Schedule. The estimated number of sites being constructed or brought on net each calendar year is as follows:

January 2009 through December 31, 2009 25 sites

January 2010 through December 31, 2010 42 sites

January 2011 through December 31, 2011 15 sites

The actual number of sites constructed will depend upon the prevailing weather each year and the progress of new hospitals planned for construction.

3.3 Intermittent Schedule. The schedule of implementation of this project is impacted by a number of factors: weather, the negotiated contract schedule with the winning OSP contractor, progress in hospitals under construction, funding timelines, and permitting issues.

3.3.1 The typical OSP construction year in Iowa is March through November. Depending on the particular site schedule, construction may start earlier or extend past the typical dates.

3.3.2 A Vendor desiring to provide these supplemental on-demand Quality Assurance Services must consider the above factors when sizing and planning the deployment of the SI (site inspector) workforce.

3.4 Number of Simultaneous Projects underway. For bidding purposes there will be no more than 10 OSP Construction projects requiring oversight on any one day.

3.4.1 Site Inspectors (SI) may be assigned to provide spot-checking oversight for multiple projects at the same time.

3.4.2 The ICNOSPM will coordinate with the vendor to ensure that the site inspectors are deployed in a logical and efficient manner.

3.4.3 “Spot-Checking” is defined as, but not limited to: the intermittent visitation to a construction route/site(s) for the purposes of observing the progress, quality, and safety of the

Outside Plant construction work being performed under this contract. It includes the verification of bore and plowing depths, and to ensure cable placement is in accordance with standard industry practices, that adjacent properties are being protected, One Call notifications are being made, and that the provisions of Annex G - **DETAILED OUTSIDE PLANT INSTALLATION SPECIFICATIONS** to IRHTP RFP 08-001 are being adhered to.

3.5 Eligible Vendors

3.5.1 Vendor qualified to bid. Any qualified Vendor who was qualified to bid on IRHTP RFP 08-001, but not awarded a contract may bid on this RFP.

3.5.2 Business relationship disqualifies vendors. Any qualified Vendor will not be awarded a contract if the Vendor has any business relationship with any Vendors who were awarded a contract under IRHTP RFP 08-001.

3.5.3 Other qualifications. Any other vendor meeting the Vendor Qualifications stated below.

3.6 Vendor Qualifications

3.6.1 Outside Plant Construction. The vendor shall be a knowledgeable Telecommunications Outside Plant construction firm and shall have been in the business of Outside Plant Construction for at least five years,

(or)

3.6.2 Consulting Firm or Civil Engineer. Shall be an Iowa registered consulting firm employing or retaining a registered professional civil engineer on staff with five years experience in the design and construction of fiber optic cable facilities.

(or)

3.6.3 Minimum required experience. A Project Management or Communications Consulting firm employing or retaining staff, wherein each SI candidate has a minimum of five years experience in the management of, supervision of, the construction of fiber optic cable facilities. Retained graduate electrical engineers on staff with a minimum of 5 yrs industrial experience shall also be deemed as qualified.

3.6.4 Narrative required. Applying vendors shall submit a narrative describing their firm, the scope of its experience in the area of OSP Fiber Optic Cable construction, and a resume` of the experience and qualifications of each site inspector that will be potentially assigned to this project.

3.7 Site Inspectors

3.7.1 Site Inspector Qualifications. Only knowledgeable and experienced OSP Field Personnel (Site Inspectors) experienced in the field of OSP Fiber Optic Cable installation will be accepted as qualified site inspectors. Electrical Engineers with Five Years of commercial experience will be deemed as qualified. Field personnel must be administratively supervised by the Vendor's registered engineer or by a designated qualified Supervisor approved by the IRHTP Project Coordinator.

3.7.2 IRHTP Approval of all Site Inspectors. The Vendor shall submit resumes to the IRHTP Project Coordinator for all site personnel who will be employed by the Vendor for this project. The IRHTP will pay particular attention to the practical experience and training of

each site inspector (SI) submitted for approval. The IRHTP must approve each SI before he/she can be deployed on this project.

3.7.3 Augmentation Support. Normally, the ICN Outside Plant Manager will assimilate the some of the IRHTP QAIS requirements into his daily workload. However, as workloads dictate, the ICN Outside Plant Manager (ICNOSPM) will request augmentation support in the form of additional qualified Site Inspectors from the Vendor under the contract that will be awarded as a result of this RFP.

3.7.4 Level of Oversight. The OSP Field Personnel (site inspectors) (SI) shall provide supplemental on-demand oversight at each construction location when requested by the ICNOSPM. The vendor providing services under this RFP will receive a minimum of 48 hours notice from the ICNOSPM prior to commencement of work at any particular site. The Vendor shall assign a SI to a project and notify the ICNOSPM who is assigned. The ICNOSPM or his designee shall have direct supervision over the SI while the SI is assigned to a particular IRHTP project.

3.7.5 Minimum period of work. When a SI is requested for assignment as a supplemental SI by the ICNOSPM, it shall be for a minimum period of not less than eight (8) hours, including travel time. The overall length of the assignment at any particular site is at the discretion of the ICNOSPM.

3.7. 6 Reporting. The assigned site inspector shall submit a weekly project progress report with daily time and travel logs to the Vendor for each assigned project at the COB each Thursday. The format and contents of the daily log will be negotiated with the vendor upon contract award. The Vendor will collect these reports and, in turn, will meet with the IRHTP designated representative each Friday of every project workweek. The IRHTP Project Coordinator will prescribe the report format and how this report will be communicated.

3.8 Expenses.

3.8.1 All supporting costs (such as per diem and travel, communications, and administrative) for the deployment of the site inspectors under this RFP 09-002 must be determined and included in the hourly rate referred to as the “burdened hourly rate.”

3.8.2 The compilation of the Firm Fixed Fee as depicted on the Annex A - Cost Submittal Sheet must include **all** anticipated expenses for the **entire three year contractual period.**

3.9 Services Requested.

3.9.1 Examples of Quality Assurance Services Requested. The following are examples of, but not limited to, the types of quality assurance service requested. This is a partial list and does not limit the site inspector’s responsibility. The site inspector is expected to rely on training and personal experience to guide performance. The ICNOSPM will dictate specific tasks as they are identified.

3.9.1.1 The site inspector (SI) shall act as the participating Health Care Provider’s (HCP) construction representative during the phases of building penetration and cable placement upon the HCP’s property.

3.9.1.2 The SI shall carefully monitor the installation of the inside fiber facilities within the HCP’s building to ensure that construction does not interfere with Hospital

Operations. SI shall act as the primary interface between the HCP's designated representative and the Contractor's personnel.

3.9.1.3 The SI shall verify that all necessary permits and easements are in place before the Contractor begins work.

3.9.1.4 The SI shall observe that all the necessary barricades and signs are in place when the Contractor is working on site.

3.9.1.5 The SI shall act as the IRHTTP Safety Officer over all work being performed under this contract in a particular community. SI shall stop work immediately anytime an unsafe condition is discovered and report situation at once to ICNOSPM. The SI shall maintain vigilance for traffic control issues and traffic circulation problems and resolve them as soon as possible.

3.9.1.6 The SI shall verify all bore, plow, and trenching depths to ensure they are in conformance with Chapter 3 Annex G.

3.9.1.7 The SI shall be knowledgeable of and responsible for compliance with all of the detailed specifications in Chapter 3 Annex G pertaining to OSP construction being done under this RFP.

3.9.1.8 The SI in concert with the ICNOSPM, shall coordinate a schedule for the entry into ICN Cable vaults, hand holes, pulling tubs, duct banks, and ICN FOTs rooms.

3.9.1.9 The SI shall verify that all construction drawings are redlined in accordance to the actual route constructed.

3.9.1.10 The SI shall note all pre-existing route conditions (such as cracked pavement, washouts, rocky areas not supporting grass, and document them with a digital camera.

3.10 Executive Summary

3.10.1 Content of Executive Summary. The vendor shall prepare an executive summary and overview of the services being offered, including all of the following information:

3.10.1.1 Statements that demonstrate that the vendor understands and agrees with the terms and conditions of the RFP and the proposed contract. .

3.10.1.2 An overview of the vendor's plans for timely delivery of services (including project management approach).

3.10.1.3 An overview of the vendor's knowledge of requirements and its proposed approach for delivering results.

3.11 Work Plan

3.11.1 The SI shall address each deliverable and performance measure in Section 3 of RFP 08-001. The work plan must be fully responsive to project requirements found in RFP 08-001.

3.11.2 Proposals must identify any deviations from the requirements of this RFP09-002 or requirements the vendor cannot satisfy. Any deviations from the requirements of the RFP or any requirement of the RFP that the vendor cannot satisfy may disqualify the vendor.

3.12 Background Information

3.12.1 The vendor shall provide the following general background information:

3.12.1.1 Name, address, telephone number, FAX number and e-mail address of the vendor including all operating names as well as those doing business as (d/b/a) and assumed names of the vendor.

3.12.1.2 Form of business entity, i.e., corporation, partnership, proprietorship, Limited Liability Company.

3.12.1.3 State of incorporation, state of formation, or state of organization.

3.12.1.4 Identify and specify the location(s) and telephone numbers of the major offices and other facilities that relate to the vendor's performance under the terms of this RFP.

3.12.1.5 Local office address and phone number (if any).

3.12.1.6 Number of employees per each location.

3.12.1.7 Type of business.

3.12.1.8 Name, address and telephone number of the vendor's representative to contact regarding all contractual and technical matters concerning this proposal.

3.12.1.9 Name, address and telephone number of the vendor's representative to contact regarding scheduling and other arrangements.

3.12.1.10 Name and qualifications of any subcontractors who will be involved with this project.

3.12.1.11 Identify the vendor's accounting firm.

3.12.2 The successful vendor will be required to register to conduct business in Iowa. If already registered, provide the date of the vendor's registration to conduct business in Iowa and the name of the vendor's registered agent.

3.12.3 Company Experience

3.12.3.1 The vendor must provide the following information regarding its experience:

3.12.3.1.1 Number of years in business.

3.12.3.1.2 Number of years experience providing the types of services sought by the RFP.

3.12.3.1.3 Describe the level of technical experience in providing the types of services sought by the RFP.

3.12.3.1.4 List all services similar to those sought by this RFP that the vendor has provided to other businesses or governmental entities within the last five years (include dates of service).

3.12.3.2 Past Outside Plant Construction Experience. List contact references from successful past or present clients knowledgeable of the vendor's performance in providing outside plant construction services or project management services to governmental jurisdictions, state or regional, with buried fiber optic cable networks.

3.12.3.3 Personnel. The vendor must provide resumes for all key personnel, as defined in Section 3, involved in providing the services discussed in this RFP. The following information must be included in the resumes:

3.12.3.3.1.1 Full name.

3.12.3.3.1.2 Years of experience and employment history, particularly as it relates to the scope of services specified herein.

3.13 Firm Fixed Price

3.13.1 Burdened Hourly Rate. The Vendor providing the Quality Assurance Inspection Services shall submit one price in the form of firm fixed price based on a “burdened” hourly rate for the oversight inspection and/or link-segment checklist completion of these 69 constructed sites and 19 on-net sites over a three-year period.

3.13.2 Must include All Costs. The firm fixed price must include all other costs such as communications, office supplies, and other specific requirements to do the job.

3.13.3 Price Held for Three Years. The Vendor must hold the firm fixed rate bid for a period of three years ending December 31, 2011.

3.13.4 Invoices for Payment of QAIS. The vendor shall submit Invoices to the IRHTP Project Coordinator for payment per an agreed upon schedule as shown on the USAC Network Cost Worksheet. (See USAC Payment Process document attached.)

3.13.5 Retainage. OSP Construction Vendors will have 10% retainage withheld until such time as IRHTP Project Coordinator is satisfied that all earth settling has occurred, all landscaping is healthy and growing, and there are no issues with drain tile or similar items. These sites will then require a return visit by the Quality Assurance SI after a specified period of time to again review the project and then if found satisfactory, recommend to the IRHTP Project Coordinator that he release the construction vendor’s retainage.

3.14 Award Process.

3.14.1 Evaluation Committee. An evaluation committee assigned by personnel within the IRHTP will review the bid proposals. The evaluation committee will consider all information provided when making its recommendations and may consider relevant information from other sources.

3.14.2 Recommendation. The evaluation committee will make its recommendation to the IRHTP Steering Committee indicating the committee’s choice.

3.14.3 Selection. The IRHTP Steering Committee will select the Vendor to receive the award. The IRHTP Steering Committee is not bound by the evaluation committee’s recommendation. All Vendors submitting Bid Proposals will receive notification of the award.

3.14.4 Contract. All applicable contracting requirements imposed by this RFP shall be met by the Vendor. The successful Vendor must, within sixty (60) days, enter into a Contract with the IRHTP to implement the service contemplated by this RFP. Failure of a successful Vendor to agree to the terms of a Contract within a timely manner may be grounds for the IRHTP to award to the next compliant Vendor.

3.15 Bid Response Evaluation Criteria.

3.15.1 Award Criteria. The IRHTP may award a Contract to the most responsible and cost effective Vendor meeting the requirements of this RFP and which, in the sole discretion of the IRHTP, provides the best value to the project after considering price and compliance with the provisions of this RFP.

3.15.2 Conflict of Interest Evaluation. The IRHTP will perform an in-depth due diligence process to ensure that there are no conflicts of interest between the Part I and Quality Assurance Vendors. Vendors that received a RFP 08-001 Part I award to install fiber cannot bid or receive an award under this RFP 09-002.

ANNEX A
COST SUBMITTAL SHEET
RFP 09-002

Costing Model One – Sixty Six (66) Constructed Sites

Coordination meetings, problem resolution
and resolution of administrative issues on site. 8 hours

Site Construction Quality Assurance Spot-Checking 8 hours

Completion of Final Link-Segment Checklist with contractor
and the HCP representative. (May require dedicated travel) 8 hours

Re-inspection for release of retainage and the completion of
The final site checklist
(May require dedicated travel) 8 hours

Total Hours per constructed site 32 hours

Cost Calculation

Sixty six (66) sites times (x) 32 hours times (x) the burdened hourly rate
of \$ _____ equals (=) a Total Three-Year Firm Fixed Cost of \$ _____

Costing Model Two – Nineteen (16) On-Net Sites

Completion of Modified Final Link-Segment Checklist with contractor
and the HCP representative. 8 hours

Cost Calculation

Nineteen (19) sites times (x) 8 hours times (x) the burdened hourly rate
of \$ _____ equals (=) a Total Three-Year Firm Fixed Cost of \$ _____

Total three year firm Fixed Cost (Cost Calculation One + Cost Calculation Two)
\$ _____ (This is the evaluated cost)

Bid responses containing only an hourly rate “plus expenses” will not be considered by
the IRHTP.

The undersigned submits the total of \$ _____ as our Total Three-Year Firm Fixed Costs
for Quality Assurance Inspection Services:

Name of Vendor: _____

Address: _____

By: _____

Vendor’s Authorized Agent Signature: _____

Note: The Vendor’s authorized agent must sign this sheet.

Sheet One of One Sheet

Annex B
LIST OF PARTICIPATING HCPs
RFP 09-002

SID	HOSPITAL NAME	LOCATION	ON NET
9.91	Monroe County Hospital	Albia	
16.4	Kossuth Regional Health Center	Algona	
11.6	Audubon County Memorial Hospital	Audubon	
7.3	Genesis Medical Center	Bettendorf	
7.5	Genesis Medical Center (Imaging Center)	Bettendorf	
9.5	Davis County Hospital	Bloomfield	X
14.4	Boone County Hospital	Boone	
1.6a	Hancock Co. Memorial Hospital	Britt	
14.3	St. Anthony Regional Hospital	Carroll	
5.2	Mercy Medical Center	Cedar Rapids	
9.7	Mercy Medical Center	Centerville	X
9.9	Lucas County Health Center	Chariton	X
1.2	Floyd County Medical Center	Charles City	
13.2	Cherokee Regional Medical Center	Cherokee	
12.2	Clarinda Regional Health Center	Clarinda	
7.1	Mercy Medical Center	Clinton	
11.4	Alegent Health Mercy Hospital	Corning	
9.8	Wayne County Hospital	Corydon	X
12.5	Jennie Edmundson Hospital	Council Bluffs	
12.6	Alegent Health Center	Council Bluffs	
2.1	Regional Health Services of Howard County	Cresco	
7.3	Genesis Medical Center	Davenport	
2.2	Winneshiek Medical Center	Decorah	
13.3	Crawford County Memorial Hospital	Denison	
10.1	Mercy Medical Center	Des Moines	X
10.7	Mercy Lakes West (Mercy Capitol)	Des Moines	X
7.7a	Genesis Health Systems - Dewitt	Dewitt	
3.1	Mercy Medical Center	Dubuque	
3.3a	Mercy Medical Center - Dyersville	Dyersville	
2.3	Central Community Hospital	Elkader	X

SID	HOSPITAL NAME	LOCATION	ON NET
16.2	Palo Alto County Health System	Emmetsburg	
16.3	Avera Holy Family	Estherville	
9.3	Jefferson County Health Center	Fairfield	
8.2	Fort Madison Community Hospital	Fort Madison	
11.1	Adair County Memorial Hospital	Greenfield	
12.1	Grape Community Hospital	Hamburg	
1.4	Franklin General Hospital	Hampton	
15.5a	Hawarden Community Hospital	Hawarden	
13.1	Horn Memorial Hospital	Ida Grove	
4.2	Buchanan County Health Center	Independence	
6.1	University of Iowa Hospital and Clinics	Iowa City	X
6.2	Mercy Iowa City	Iowa City	
1.3	Ellsworth Municipal Hospital	Iowa Falls	
8.3	Keokuk Area Hospital	Keokuk	
9.4	Van Buren County Hospital	Keosauqua	
10.5	Knoxville Hospital and Clinics	Knoxville	
17.2a	Stewart Memorial Community Hospital	Lake City	
13.6	Floyd Valley Hospital	Le Mars	X
3.2	Regional Medical Center	Manchester	
14.2	Manning Regional Healthcare Center	Manning	
6.4	Marengo Memorial Hospital	Marengo	
10.3	Marshalltown Medical and Surgical Center	Marshalltown	
1.7a	Mercy Medical Center – North Iowa	Mason City	
12.4	Alegent Health Community Memorial Hospital	Missouri Valley	
11.3	Ringgold County Hospital	Mount Ayr	
8.4	Henry County Health Center	Mount Pleasant	
14.1	Story County Medical Center	Nevada	
2.5	Mercy Medical Center	New Hampton	
13.4a	Burgess Health Center	Onawa	
15.2	Orange City Area Health Systems	Orange City	X
1.1	Mitchell County Regional Health Center	Osage	
9.1	Mahaska Health Partnership	Oskaloosa	
9.6	Ottumwa Regional Health Center	Ottumwa	X
10.4	Pella Regional Health Center	Pella	
10.9	Dallas County Hospital	Perry	
15.3	Baum-Harmon Mercy Hospital	Primghar	
15.8	Sanford Hospital	Rock Rapids	
15.7	Hegg Memorial Hospital	Rock Valley	X
15.4	Sanford Sheldon Medical Center	Sheldon	X
12.3	Shenandoah Medical Center	Shenandoah	
15.1	Osceola Community Hospital	Sibley	X
15.6	Sioux Center Community Hospital	Sioux Center	

SID	HOSPITAL NAME	LOCATION	ON NET
13.5	Mercy Medical Center – Sioux City	Sioux City	
16.5	Spencer Hospital	Spencer	X
5.1	Virginia Gay Hospital	Vinton	
6.3	Washington Co. Hospital and Clinics	Washington	
2.6	Veterans Memorial Hospital	Waukon	
4.1	Waverly Health Center	Waverly	
17.1	Hamilton Hospital	Webster City	
8.1	Great River Medical Center	West Burlington	
2.4	Palmer Lutheran Health Center	West Union	
10.6	Madison County Health Care System	Winterset	X
		66 sites	16 sites

Sites that are bold are the on-net sites that receive only the final link-segment checklist completion services. No spot-checking or other Quality Assurance services are required at these sites.

ANNEX C
BID PROPOSAL COMPLIANCE FORM
RFP 09-002

Vendor affirms that the information contained in the bid proposal is true and accurately portrays all aspects of the goods or services or both contemplated by this RFP. The Vendor is aware that any substantive misinformation or misrepresentation may disqualify the bid proposal from further consideration.

Vendor hereby certifies total compliance with all other terms, conditions and specifications of this RFP except as expressly stated below:

Chapter 1, Administrative Issues

Chapter 2, Contractual Terms & Conditions (includes Attachment 1)

Chapter 3, Technical Specifications

Chapter 4, Evaluation Criteria

I certify that I have the authority to bind the Vendor indicated below to the specific terms and conditions imposed in this RFP and offered in this bid proposal, and that by my signature on this document I specifically agree to all of the waivers, restrictions and requirements of this RFP as conditions precedent to submitting this proposal. I further state that in making this bid proposal that the Vendor has not consulted with others for the purpose of restricting competition or violating State or Federal anti-trust laws and has not knowingly made any false statements in this proposal.

Authorized Signature: _____

Printed Name: _____

Title: _____

Telephone: _____

Fax Number: _____

E-Mail: _____

Business Name: _____

Address: _____

Federal ID Number: _____

USAC SPIN: _____

ANNEX D
AUTHORIZATION TO RELEASE INFORMATION
RFP 09-002

_____ (Name of Vendor) hereby authorizes any person or entity, public or private, having any information concerning the Vendor's background, including but not limited to its performance history regarding its prior rendering of services similar to those detailed in this RFP, to release such information to the IRHTP.

The Vendor acknowledges that it may not agree with the information and opinions given by such person or entity in response to a reference request. The Vendor acknowledges that the information and opinions given by such person or entity may hurt its chances to receive contract awards from the IRHTP or may otherwise hurt its reputation or operations. The Vendor is willing to take that risk. The Vendor agrees to release all persons, entities, and the IRHTP from any liability whatsoever that may be incurred in releasing this information or using this information.

Printed Name of Vendor

Signature of Authorized Representative

Date

ANNEX E
VENDOR CERTIFICATION FORM
RFP 09-002

<Vendor Letterhead>

Certification of [Vendor]

I, _____[name of corporate officer], on behalf of _____[Vendor name] (SPIN _____) certify and swear under the penalty of perjury, that to the best of my knowledge, information and belief, all federal Rural Health Care Pilot Program support provided to us will be used only for eligible Pilot Program purposes for which the support is intended, as described in the Pilot Program Order (WC Docket 02-60; FCC 07-498, released November 19, 2007), and consistent with related FCC orders, section 254(h)(2)(A) of the Telecommunications Act of 1934, as amended, and Parts 54.601 *et. seq.* of the FCC's rules.

(Signature)

Name (Printed)

Title

Date

NOTARIZED BY: _____

ANNEX F
QUALITY ASSURANCE EVALUATION CRITERIA
RFP 09-002

4.1 Award Process - Quality Assurance

4.1.1 An evaluation committee assigned by personnel within the IRHTP will review the bid proposals. The evaluation committee will consider all information provided when making its recommendations and may consider relevant information from other sources.

4.1.2 The evaluation committee will make its recommendation to the IRHTP Steering Committee indicating the committee's choice. The IRHTP Steering Committee will select the Vendor to receive the award. The IRHTP Steering Committee is not bound by the review committee's recommendation. All Vendors submitting Bid Proposals will receive notification of the award.

4.1.3 All applicable contracting requirements imposed by this RFP and Iowa law shall be met by the Vendor. The successful Vendor must, in a timely manner, enter into a Contract with the IRHTP to implement the service contemplated by this RFP. Failure of a successful Vendor to agree to the terms of a Contract within a timely manner may be grounds for the IRHTP to award to the next compliant Vendor.

4.2 Evaluation Criteria – Quality Assurance

4.2.1 A Bid Proposal will not be evaluated if all of the Mandatory Requirements identified in Chapter 3 and Attachment 4 are not met and/or fulfilled.

4.2.2 The IRHTP may award a Contract to the most responsible Vendor meeting the requirements of this RFP and which, in the sole discretion of the IRHTP, provides the best value to the project after considering price and compliance with the provisions of Chapter 3.

4.2.3 The IRHTP is not required to accept a low bid.

Evaluation Criteria Scoring
Quality Assurance

Overall Project Experience

IRHTTP will take into consideration the qualifications of the vendor's proposed field staff and the size or number of like construction projects managed or overseen thus far by the vendor and/or by his staff.

Vendor may be awarded up to **15 Points**

Cost

Total firm fixed price as submitted per the costing model

Vendor may be awarded up to **40 Points**

Grasp of the Project and Design

Vendor demonstrates a clear understanding and grasp of the project. Response is clearly written and organized.

Vendor may be awarded up to **25 Points**

Vendor's Capabilities

Vendor has the necessary qualified field staff and resources to accomplish the work on schedule. Overall evaluation of vendor's technical ability.

Vendor may be awarded up to **15 Points**

Vendor Agrees to

Submit invoices in accordance with USAC requirements. Proactively engage with the final audit team at no additional cost.

Vendor may be awarded up to **5 Points**

Total 100 Points

ANNEX G
DETAILED OUTSIDE PLANT INSTALLATION SPECIFICATIONS
RFP 09-002

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SECTION 1 - General Requirements

1.0 Intent

- 0.1.** To supplement the provisions of the **TECHNICAL REQUIREMENTS, SECTION 3.0** by outlining special conditions applicable to project. In the following the term Contractor and Vendor may be interchanged
- 0.2.** To set forth requirements of performance, type of equipment or structure desired, and standards of materials and construction.
- 0.3.** To describe work set out in Contract Documents, unless otherwise specifically indicated.
- 0.4.** To require performance of complete work in spite of omission of specific reference to any minor component parts.
- 0.5.** Contractor to provide for new materials and equipment, unless otherwise indicated.

2.0 Location

- 0.6.** Work is located in public right-of-way and easements across private, City, School and hospital owned properties as located in RFP.

3.0 Right-Of-Way

- 3.1. Permits** Contractor will obtain permits from departments and/or agencies of cities, state, county, and federal government, railroads, or other entities that provide for the placement of facilities within their respective rights of way, unless otherwise indicated.
- 3.2. Easements** Contractor will provide easements for construction on private lands.
 - 3.2.1.1. All Easements must be IRHTP approved prior to implementation.
 - 3.2.1.2. It is preferred that all easements be one time, up front payments with no recurring charges.
- 3.3. Equipment** Confine movements of equipment and personnel, storage of materials, excavation, and all other construction operations within the right-of-way provided.
- 3.4. Liability** Contractor will be held liable by Iowa Department of Transportation, City, Schools and adjacent property owners for damages outside rights-of-way and easements; failure of Engineer to warn Contractor about incidence of trespassing does not relieve liability.
- 3.5. Gates** Ingress and egress will vary according to right of way agreements. If necessary, the Contractor will provide gates in fences and remove after completion.
- 3.6. Traffic** On freeways, installation must be accomplished without entering the through traffic roadway or ramps. No vehicles, equipment or materials shall be parked or stored upon any portion of the median, through traffic roadway and ramps or shoulders thereof or within the clear zone.

4.0 Order Of Construction

- 4.1. Construction Schedule** Provide IRHTP Project Coordinator with proposed a schedule of construction showing start and completion dates. Show each section of construction and the estimated time of completion, to include project complete percentage. This schedule will be “on going process”. An update of the aforementioned schedule will be provided to the IRHTP Project Coordinator every week by noon on Friday. This base schedule of work shall detail the activities, tasks and manpower associated with the project. Contractor shall provide to IRHTP a man-load schedule showing all tasks associated with the project, the number of crews, and the crew sizes (number of personnel) available for each task. The schedules shall contain sufficient detail to ensure that the IRHTP can measure project progress at least weekly throughout the project duration. The schedules shall comply with the requirements of the overall project schedule, and shall be updated by the contractor as necessary or as required by IRHTP. Work schedules shall be provided by the contractor within five (5) working days of contract award. Coordinate work with IRHTP Project Coordinator to assure orderly and expeditious progress of the work.
- 4.2. Work Schedule** Contractor shall establish schedule of working hours for construction, subject to approval of IRHTP Project Coordinator.

5.0 Interruptions To Service

- 5.1. Utilities** Existing utilities will remain in continuous operation during construction.

6.0 Construction Facilities By Contractor

- 6.1. Telephone contact** Provide telephone at which Contractor can be reached by IRHTP Project Coordinator at all times during the working day; provide liaison between telephone and construction personnel for expeditious handling of messages.

- 6.1.1. Provide IRHTP Project Coordinator with at least two telephone numbers where Contractor’s representative can be reached evenings, weekends and holidays in event of emergency. Place on construction schedule.

- 6.2. Construction Facilities** Location of all construction facilities including storage yard, subject to approval by IRHTP Project Coordinator; remove all construction facilities upon completion of work.

- 6.3. Sanitary Facilities** Provide and maintain suitable sanitary facilities for construction personnel for duration of work; remove upon completion of work.

- 6.4. Unauthorized Access** Provide fence, barricades, and/or watchmen to prevent access of unauthorized persons to site where work is in progress.

7.0 Plans, Position, Line And Grade

- 7.1. Plans** Contractor shall provide IRHTP Project Coordinator with one set of plans and specifications within 15 days after execution of contract unless otherwise stated in RFP.
- 7.2. Detailed Plans** Contractor shall provide IRHTP Project Coordinator with additional and supplemental plans as may be required to show details of

construction after approval of Contractors' drawings and data on materials and equipment.

7.3. Revised Plans Contractor will provide IRHTP Project Coordinator with such revised plans and specifications as may be required to show any authorized changes or extra work.

7.3.1. Construct to lines and grades shown on plans or as specified hereinafter.

7.4. Benchmarks Contractor will establish required benchmarks and base lines as shown on plans.

7.5. Survey Contractor to provide detailed survey and staking for location, and elevation of construction.

7.6. Test Holes Contractor shall provide, without extra compensation, all people and necessary tools to make all test holes and exploration, at any time, for purpose of determining location of existing structures beneath ground surface that might conflict with work of Contractor.

7.7. Preservation Contractor shall preserve all monuments, reference points, stakes and benchmarks set by other entities. In case of destruction by Contractor's negligence or carelessness, he will be charged with resulting expense of replacement, and responsibility for any mistake or loss of time caused thereby.

8.0 Work Included

8.1. Provide requirements for Plan Furnish all plans, materials, labor and equipment to construct as set out in the attached plans and/or RFP.

9.0 Starting And Completion Time

9.1. Start Time Commence work within 20 calendar days after date set forth in written Notice to Proceed.

9.2. Completion Time Complete work within time set out in Notice of Hearing and Letting.

10.0 Information For IRHTP Project Coordinator

10.1. Submissions After award of contract, submit the following information and drawings for IRHTP Project Coordinator's review: manufacturer's specifications and catalog data for material and such other data as requested by Engineer.

10.2. Schedule Within 15 days after award of contract, provide construction schedule showing start and completion of various portions of work and construction plans.

10.2.1. Purchase orders and subcontracts without prices.

10.2.2. All materials test reports.

10.2.3. Proposed equipment and method for boring/jacking; details of boring/jacking pit.

10.2.4. Proposed equipment and method for trenching.

10.2.5. Proposed equipment and method for plowing.

10.2.6. Construction plans, unless otherwise indicated:

10.2.6.1. Location of facility in relationship to established landmarks.

10.2.6.2. Public or private r/w. Furnish a copy of permit and/or easement in IRHTTP's name, unless otherwise indicated.

11.0 Plans And Specifications

11.1. Plans to IRHTP Contractor will furnish 2 sets of plans and specifications to the IRHTP Project Coordinator after award of contract unless otherwise stated in RFP.

11.2. Plans to Supervisors Contractor will provide one set of plans and specifications for each foreman or superintendent in charge of each crew on job.

12.0 Standards And Codes

12.1. Practices Do work in accordance with best present-day installation and construction practices.

12.2. Codes Conform to and test materials in accordance with applicable sections of latest revisions or tentative revisions of following codes and standards unless specifically noted to the contrary.

12.2.1. American Association of State and Highway Transportation Officials (AASHTO)

12.2.2. American National Standards Institute (ANSI)

12.2.3. American Society for Testing and Materials (ASTM)

12.2.4. Iowa Department of Transportation (IDOT); latest edition of standard specifications and addenda.

12.2.5. Federal Specifications (FS)

12.2.6. Occupational Safety and Health Act of 1970 (Public Law 91-596) (OSHA)

12.2.7. Iowa Occupational Safety and Health Act of 1972 (Chapter 88, Code of Iowa 1995) (OSHA).

12.2.8. Standard and codes of the State of Iowa and applicable local standards, codes and ordinances of the particular city where construction is taking place.

12.2.9. Other standards and codes that may be applicable to acceptable standards of the industry for equipment, materials and installation under contract.

13.0 Responsibility Of Contractor

13.1. Protection of work Protection of Contractor's work..

13.2. Protection of property Protection of all property from injury or loss resulting from Contractor's operations.

13.3. Replacement Replace or repair objects sustaining any such damage, injury or loss to satisfaction of the IRHTP Project Coordinator.

13.4. Protection of existing structures Without limiting GENERAL REQUIREMENTS of Contract Documents, protect flagpoles, sidewalks, streets, pavements, fences, pipe, conduit, utilities, trees, and shrubs and structures.

13.5. Locates Cooperate with IRHTP Project Coordinator and representative of utilities in locating underground utility lines and structures; incorrect, inaccurate or inadequate information concerning location of utilities or structures shall not relieve Contractor of responsibility for damage thereto caused by Contractor's operations.

- 13.6. Utility Coordination** Contractor will locate underground lines of third parties in the cable route area. Contractor will call Iowa One Call (800-292-8989) prior to any work commencement. Contractor will contact any utilities not participating in the One Call Service, directly. Contractor will hold a single locate “precon meeting” for all utilities. It will be the Contractors responsibility to document the name, address, phone and fax number of all persons present at meeting plus the locate confirmation number by project. All the aforementioned documentation will be supplied to the IRHTP as part of the “as built” package. Contractor will be responsible for hand digging any crossing such as pipeline, drainage tile, cable or any other buried facility prior to working in the area. Since all drawings are generally diagrammatic and not all utilities are included on them, the Contractor will take every precaution necessary to avoid damage to any underground facility.
- 13.7. Cleanup** Keep cleanup current on a daily basis with construction operations.
- 13.8. Compliance** Comply with all federal, state, and city laws and ordinances.
- 13.9. Safekeeping** Contractor shall assume full responsibility for safekeeping of all materials and equipment and for all unfinished work until final acceptance by IRHTP. Materials and equipment that are damaged or destroyed from any cause shall be replaced at Contractor’s expense.
- 13.10. Receipts** Contractor shall issue written receipts for all such property and account to IRHTP for any damage to or loss of such property while in its custody or control.
- 13.11. Storage** If IRHTP is providing warehousing with security for cable, conduit and other OSP materials on a temporary basis; it will be the responsibility of the contractor to arrange for their own storage facilities, and delivery of material from IRHTP warehouses. Should a contractor elect to provide their own storage facilities in their particular area, then contractor will be solely responsible for any materials supplied to that facility by IRHTP. IRHTP may require the Subcontractor to furnish Builders Risk Insurance for this material at the contractor's expense. Security for the job site areas is the responsibility of the contractor. Subcontractor is to comply with the security requirements of owner’s site security and other applicable entities.
- 13.12. Indemnity** Contractor shall indemnify and hold harmless IRHTP against any liens filed for non-payment of Contractor’s bills in connection with contract work. Contractor shall furnish IRHTP satisfactory evidence that all persons who have done work or furnished materials, equipment, or service of any type, under the contract have been fully paid prior to acceptance by IRHTP.
- 13.13. Lost Time** Contractors/subcontractors shall pay time and material charges of IRHTP personnel, when contractor has made a commitment to be on site by a certain time and is either late or no show.
- 13.14. Damages** Liquidated damages in the amount of **Two Hundred Dollars (\$200.00)** per consecutive calendar day will be assessed for each day that the work shall remain uncompleted after the end of the contract period with due allowance for extensions of the contract period due to conditions beyond the control of the contractor/subcontractor.

14.0 Subcontracts

- 14.1. Sub-letting** Contractor shall not assign, sub-let or transfer the whole or any part of work herein specified without written consent of IRHTP. Assignment, sub-letting or transfer shall not relieve the Contractor from its responsibilities set forth herein.
- 14.2. IRHTP relation to sub-contractors** Detailed specifications are separated into titled parts for convenience or reference and to facilitate letting of contracts and subcontracts. Such arrangement shall not obligate IRHTP Project Coordinator to establish limits on contracts between Contractors and subcontractors.

15.0 Contractor's/Subcontractor's Employees

- 15.1. Supervision** Contractor shall personally supervise subcontracted work or provide a capable superintendent satisfactory to IRHTP Project Coordinator. Superintendent shall be authorized to receive instructions from IRHTP Project Coordinator/representative.
- 15.2. Dismissal of employees** Incompetent or Incorrigible employees shall be dismissed by the Contractor or its representative when requested by IRHTP Project Coordinator. Such dismissed persons shall not be permitted to return to work on contracted IRHTP project without written consent of IRHTP Project Coordinator.
- 15.3. Local labor** Contractor shall give preference to local labor in execution of this contract, insofar as is practicable.
- 15.4. Employee Data** Contractor/subcontractor shall furnish the names, social security numbers, and addresses of all the employees on each job site by month, day, and year on a weekly basis.
- 15.5. Display** Contractor/subcontractor shall have the name of their company clearly displayed on all their owned or leased vehicles and/or equipment.
- 15.6. Business Cards** Contractor/subcontractors shall have business cards with their respective companies name, phone, and fax numbers listed.
- 15.7. Representation** Contractor/subcontractor shall at all times be deemed to be representing and/or performing as an independent contractor and not as an agent or employee of IRHTP.

16.0 Permits, Regulations, Easements

- 16.1. Conformance to regulations** In execution of work specified herein, Contractor/subcontractors shall conform to regulations and ordinances of any governmental body that may apply in execution of specified work.
- 16.2. Permits** Contractor shall obtain such permits, licenses, and easements as may be required for construction of work unless otherwise indicated.

17.0 Safety

- 17.1. Safety first** NO JOB IS SO URGENT THAT TIME CANNOT BE TAKEN TO PERFORM THE WORK SAFELY.
- 17.2. Safety Requirements** Safety is the foremost concern in any contract operation. UNSAFE ACTS OR OPERATIONS WILL NOT BE TOLERATED to the point of shutdown and termination of contractor.

- 17.3. Compliance** with all Federal, State, and Local laws, ordinances, and regulations concerning health and safety as well as IRHTP standards is mandatory.
- 17.4. Weekly meeting** A weekly safety meeting involving the IRHTP field superintendent(s) will be held each Monday. The previous week and anticipated hazards will be discussed, with preventive measures outlined. For new types of activities, a hazard analysis form will be filled out and discussed with the contractor. Previous hazard analysis (as applicable to present work) will also be reviewed at this time. During the week the IRHTP representative will inspect the work sites. Any violations will immediately be brought to the attention of the contractor's supervision and corrected. Continued violations will be reason for termination of contractor. The IRHTP insists on having a quality, productive, and safe project.
- 17.5. Hard hats** will be worn by all personnel in installation areas at all times.
No exceptions.
- 17.5.1. During work in right-of-ways of interstate, secondary, and other roadways, and on all state projects, hard hats and reflective vests will be worn. **No exceptions.**
- 17.6. Daily Inspection** Traffic cones, flagmen, warning signs will be inspected each day at each work site.
- 17.7. OSHA compliance** Contractor will provide evidence that a written Confined Space Procedure, complying with the latest OSHA standards, will be adhered to. The contractor will provide a copy of their written procedure to IRHTP prior to any work that may involve entering a confined space.
- 17.8. Open Excavations** All excavations left unattended or open shall be properly barricaded or plated (steel plate if in the street) until temporarily backfilled or complete restoration has been performed. During any non-working hours, contractor shall place steel plates over any open trenches that would pose a threat to vehicular traffic. The steel plates shall be of sufficient thickness to withstand the weight of a vehicle and anchored in place to prevent movement. Open trenches and holes, not exposed to vehicular traffic will be encircled by flexible orange snow fence and shall also be covered with plywood (or equal) and anchored in place. Plywood (or equal) shall be of sufficient thickness to withstand the weight of the anticipated traffic.

18.0 Barricades And Lights

- 17.1 Pedestrian and Vehicle Protection** Erect and maintain barricades and lights and/or provide watchmen in conformance with current Manual of Uniform Traffic Control Devices (MUTCD), for protection and warning of pedestrians and vehicles; all barricades, lights and/or watchmen at expense of Contractor.
- 17.2 Signage** IRHTP Project Coordinator/representative will not allow work to proceed until all signs, barricades and lights are in place; requirements for type of signs and number of signs will be strictly enforced; improper signage during construction will constitute "improper work" and IRHTP Project Coordinator will cause Contractor to suspend work.
- 17.3 Responsibility for signs** All signs, barricades, and other traffic control devices used on the project shall be furnished, installed and maintained by Contractor; all traffic control devices shall be maintained in a state of good repair and shall be cleaned and washed periodically as needed.

19.0 The IRHTP Project Coordinator Or Representative

- 18.1 Work responsibility** IRHTP Project Coordinator or Representative shall make general observations of work as an agent of IRHTP. IRHTP Project Coordinator or Representative's general observation shall not be construed that it shall direct or control operations of Contractor/subcontractor.

20.0 Line And Grade

- 20.1. Benchmarks** Contractor shall provide benchmarks, base lines and other reference points. Contractor shall provide competent men and tools, stakes and other materials as required establishing temporary or permanent reference marks in connection with the work. Contractor shall perform such detailed measurements as required to properly lie out and construct work.

21.0 Testing

- 21.1. Cable Quality** The Contractor/Subcontractor shall be responsible for on reel verification of cable quality prior to placement.
- 21.2. Testing Requirement** One hundred percent (100%) of the cable's fiber count shall be tested at 1310 nm with an OTDR or approved acceptance sheet by manufactory or proof of testing by others. Test results will be recorded on a form supplied by IRHTP. Completed test forms on each reel shall be handed over to the IRHTP Project Coordinator.
- 21.3. Cable Responsibility** Subcontractor assumes responsibility for the cable after testing. This responsibility covers all fibers in the cable.
- 21.4. Testing Tools** The Subcontractor shall supply all tools, test equipment, consumables and incidentals necessary to perform quality testing.
- 21.5. Cable Ends** The cable ends shall be sealed upon completion of testing.

22.0 Decisions By IRHTP Project Coordinator

- 22.1. Decisions** IRHTP Project Coordinator shall make decisions, in writing, on claims between Contractor and IRHTP within a reasonable time after presentation. Such decisions shall be regarded as final except for appropriate legal recourse.

23.0 On-Site Review Or Observation

- 23.1. Materials Observation** All materials used and all work done by Contractor shall be subject at all times to review, observation, test and approval by IRHTP Project Coordinator/representative. Contractor shall furnish samples of materials for observation and test as requested by IRHTP Project Coordinator. Contractor shall furnish any information required concerning nature or source of any proposed materials or equipment.
- 23.2. Construction Observation** IRHTP Project Coordinator may observe construction, fabrication and manufacture of equipment or materials specified herein at plant or factory.

23.3. Condemnation IRHTP Project Coordinator may condemn materials, equipment or work that does not satisfactorily meet specifications by written notice to Contractor. Condemned materials, equipment or work shall be promptly removed and replaced.

23.4. Rejections IRHTP Project Coordinator may reject defective materials, equipment or work at any time prior to final acceptance by IRHTP even though said defective items may have been previously overlooked.

24.0 IRHTP Project Coordinator And/Or Engineer Technicians

24.1. Plan Adherence OSP Engineers and/or engineer technicians may be appointed by IRHTP Project Coordinator or IRHTP to insure that work is performed in accordance with plans and specifications.

24.2. Notification IRHTP Project Coordinator and/or engineer technicians shall have authority to notify Contractor in writing of work that is not being properly performed. Contractor shall be liable for any work determined by IRHTP Project Coordinator as not being properly performed.

24.3. Deviations IRHTP Project Coordinator and/or engineer technicians shall have authority to permit deviation from plans and specifications.

25.0 Time

25.1. Specified Time Contractor shall commence work within time specified and shall complete work within time specified in contract.

25.2. Normal Hours Contractor shall work normal working hours defined as ½ hour after sunrise and ½ hour before sunset unless it is an emergency situation or change has been approved by IRHTP Project Coordinator.

26.0 Delays

26.1. Time Extensions Delays caused by injunction or legal actions, damages by elements, or other causes beyond control of Contractor (of which IRHTP shall be sole judge) shall entitle Contractor to a reasonable extension of time within which to complete work.

26.1.1. Application for extension of time shall be made to IRHTP by Contractor and shall state reasons for request for extension of time.

26.1.2. No extension of time shall be valid unless made in writing by IRHTP.

26.1.3. Normal weather conditions shall not form the basis of request for extension of time.

26.1.4. Abnormal weather conditions shall form basis of request for extension of time only to the delay in excess of that resulting from normal weather conditions.

27.0 Ownership Of Materials

27.1. Payment Responsibility All materials and work covered by partial payments shall become sole property of IRHTP, but this provision shall not be construed as relieving Contractor from sole responsibility for all materials and work for which payments have been made, for restoration of damaged work, or as a waiver of rights of IRHTP to require fulfillment of all terms of contract.

28.0 Other Contracts

- 28.1. Coordination of contractors** IRHTP reserves right to let other contracts in connection with this work. Contractor shall afford other contractors reasonable opportunity for introduction and storage of their materials and execution of their work, and shall properly connect and coordinate its work with theirs.
- 28.2. Reports of defects** When proper execution of Contractor's work depends upon work of another contractor, it shall inspect other work and report any defects in writing to IRHTP Project Coordinator. Contractor's failure to inspect and report shall constitute an acceptance of other contractor's work except for defects that may develop after completion.
- 28.3. Discrepancies** To insure proper execution of its subsequent work, Contractor shall measure work already in place and shall at once report in writing to the IRHTP Project Coordinator any discrepancy between the executed work and drawings.

29.0 IRHTP Right To Do Work

- 29.1.** If Contractor neglects to prosecute work properly or fails to perform any provision of this contract, IRHTP, after three (3) days' written notice to Contractor, may, without prejudice to any other remedy it may have, make good such deficiencies and may deduct the cost thereof from the payment then or thereafter due the Contractor, provided, however, that IRHTP Project Coordinator shall approve both such action and amount charged to Contractor.

30.0 IRHTP'S Right To Terminate Contract

- 30.1. Termination of contract** IRHTP, upon certification of IRHTP Project Coordinator that there is sufficient cause to justify termination of contract, may, without prejudice to any other right or remedy, and after giving Contractor seven (7) days' notice may terminate employment of Contractor for any of following reasons:
- 30.1.1. Contractor makes a general assignment for benefit of its creditors, or is adjudged bankrupt.
 - 30.1.2. Receiver is appointed on account of Contractor's insolvency.
 - 30.1.3. Contractor persistently or repeatedly fails or refuses, except when extension of time to complete is granted, to provide enough skilled people or proper materials.
 - 30.1.4. Contractor fails to make prompt payment to subcontractors/suppliers for materials or labor.
 - 30.1.5. Contractor persistently disregards laws and ordinances or instructions of IRHTP Project Coordinator.
 - 30.1.6. Contractor violates a provision of contract.
- 30.2. Conditions of Termination** If IRHTP terminates employment of Contractor, it shall take possession of premises and all materials, tools and appliances thereon. It shall finish work by whatever method it may deem expedient. In such case Contractor shall not be entitled to receive any further payment until work is finished.

- 30.3. Unpaid Balance** If unpaid balance of contract price exceeds expense of finishing the work including compensation for additional managerial and administrative services, excess shall be paid to Contractor. If expense exceeds unpaid balance, Contractor shall pay difference to IRHTP. Expense incurred by IRHTP as herein provided, and damage incurred through Contractor's default, shall be certified by IRHTP Project Coordinator.

31.0 Contractor's Right To Stop Work Or Terminate Contract

- 31.1. Failure to Pay** If IRHTP Project Coordinator fails to issue any certificate for payment within fifteen (15) days after it is due, or if IRHTP fails to pay to Contractor with thirty (30) days of its maturity and presentation, any sum certified by IRHTP Project Coordinator, then Contractor may, upon seven (7) days simultaneous written notice to IRHTP and IRHTP Project Coordinator, stop work or terminate this contract. If Contractor elects to terminate this contract by written notice it shall recover from IRHTP payment for all work executed to date of notice and any loss sustained upon any plant or materials plus a reasonable profit.

32.0 Payments Withheld

- 32.1. Nullification of Payment** IRHTP Project Coordinator may withhold or nullify the whole or a portion of payment certificate, based on subsequently discovered evidence, to such extent as may be necessary to protect IRHTP from loss from:

32.1.1. Defective work not remedied.

32.1.2. Claims filed or reasonable evidence indicating probable filing of claims.

32.1.3. Failure of Contractor to make payments properly to subcontractors/suppliers or for materials or labor.

32.1.4. A reasonable doubt that contract can be completed for balance then unpaid.

32.1.5. Damage to another contractor.

32.1.6. Claims of IRHTP for liquidated damages.

32.1.7. Payments shall be made for amounts withheld when above grounds are removed.

33.0 Final Review, Acceptance And Final Payment

- 33.1. Final Statement** When work has been satisfactorily completed, IRHTP Project Coordinator will certify Contractor's final estimate stating that work has been completed in accordance with terms and conditions thereof with qualifications, if any, as stated. Balance found to be due Contractor according to the terms of payment shall be paid by IRHTP as specified in contract, provided, however, that any state laws which designate manner of final payment shall be followed in lieu of manner of final payment outlined above. Prior to receipt of final payment, Contractor shall file with IRHTP a receipt in full from each manufacturer, subcontractor, and dealer for all equipment and materials used on the work and a complete release of all liens, including tax liens, which may have arisen from this contract and required statements from Contractor and all subcontractors of sales and use tax paid. In lieu thereof, IRHTP, at its option, may accept from Contractor a statement showing balance due on all accounts.

- 33.2. Notification of Completion** Notify Engineer when project is considered to be complete and ready for final review.

33.3. Cost of Additional Inspections IRHTP will not make more than 2 trips to any one site for inspections. If site requires more than 2 trips, OSP Cable Contractor will pay time, material & vehicles charges for additional inspections. This paragraph inclusive of item 13.13 in RESPONSIBILITY OF CONTRACTOR.

33.4. Certification When Engineer has certified that he has reviewed the work of Contractor and stated that it is complete and in substantial conformance with the plans and specifications.

When Contractor has submitted to IRHTP and Engineer documents called for in, Annex I, Link Segment OSP Completion Check List.

34.0 Suspension Of Work

34.1. Notice to Suspend Work IRHTP may suspend work, or any part thereof, at any time, by giving ten (10) days' written notice to Contractor. The work shall be resumed by Contractor within ten (10) days after date fixed in written notice from IRHTP to Contractor to do so.

34.2. Abandonment of work If work, or any part thereof, shall be suspended and if IRHTP does not give written notice to Contractor to resume work within one (1) year of date of suspension, Contractor may abandon suspended portion of work. Contractor will be entitled to estimates and payments for all work done on the portions so abandoned, if any.

35.0 Cleaning Up

35.1. Rubbish Contractor shall keep premises free from accumulations of waste material or rubbish caused by its employees or work. After completion of work it shall remove all its rubbish and all its tools, scaffolding and surplus materials from work site. It shall leave its work "broom clean" or its equivalent, unless more exactly specified. In case of dispute the IRHTP may remove rubbish and charge cost to Contractor as IRHTP Project Coordinator shall determine to be just.

36.0 Definition Of Terms

36.1.0 MERGED AREA The Numerical designation given to Merged Area HCP Districts and selected numbers given to other Part 1 End Points as below:

36.1.1. BER Bit Error Rate is a quality measurement for digital transmissions.

36.1.2. CAPACITY The sizing of the transmission links in terms of digital data rate requirements and refers to the traffic-handling capacity.

36.1.3. CUTOVER OR ACCEPTANCE OF SERVICE The date on which a specific element of the network has been accepted by the IRHTP and placed into service and the lease commences.

36.1.4. dB The abbreviation for decibel used to define relative signal strength.

36.1.5. ELEMENT A specific connection including all electronics, equipment and facilities required to provide Gigabit service.

36.1.6. FACILITIES Transmission lines or circuits available to provide service.

36.1.7. FAR END Refers to the network end point connected to an IRHTP access point.

- 36.1.8. **FCPC** Type of optical fiber connector with low connection loss and high reflection loss characteristics.
- 36.1.9. **F.O.T.** Fiber Optic Termination equipment
- 36.1.10. **IRHTP** Iowa Rural Hospital Telecommunications Program
- 36.1.11. **INTERPRETATION** Words used in the present tense shall include the future, the future tense shall include the present, the plural shall include the singular, and the masculine shall include the feminine.
- 36.1.12. **LINK-SEGMENT** A link-segment is a fiber optic facility that extends from a predetermined point to another predetermined point. For example, the fiber that extends from the “A” Location (the HCP) to the appropriate end point (Z) location. The link-segment includes the appropriate electronics necessary to make it operational.
- 36.1.13. **MEDIA** Channels of communications, i.e., digital signal transport facilities.
- 36.1.14. **MERGED AREA** (refers to locations-educational institutions) Each Iowa County is assigned to a geographic cluster of counties and each geographic cluster of counties is identified as a separate merged area. However, individual counties may be divided between or among more than one merged area.
- 36.1.15. **MTBR** A statistical method for estimating failures of electronic equipment (Mean Time Between Failure)
- 36.1.16. **MTTR** A statistical method for estimating electronics and facilities repair time (Mean Time to Repair)
- 36.1.17. **NEAR END** Refers to the IRHTP access point used to connect an individual network element.
- 36.1.18. **nm** Abbreviation for nanometers, a measure applied to the wavelength of light transmitted over an optical fiber.
- 36.1.19. **ORDERWIRE** A voice circuit with equipment connecting a far (remote) end point and the near end point for maintenance activities.
- 36.1.20. **PART I** All Part I Elements for the entire IRHTP.
- 36.1.21. **PART I END POINT** A State provided facility at which Part I link and Part II links are terminated. Regional switching functions are provided. Serves as the Point of Presence for the county in which it is located.
- 36.1.22. **PART II END POINT** A State provided facility at which Part I and Part II links are terminated. Switching (secondary) is provided. Serves as the Point of Presence for the county in which it is located.
- 36.1.23. **PART III END POINT** The communications connection between secondary switching centers and individual accredited nonpublic schools, public schools and city, regional, HCP’s and county libraries.
- 36.1.24. **POP** Point of Presence is the IRHTP part I or Part II in a specific municipality that may be used as an IRHTP access point for interconnecting network elements.

- 36.1.25. **REGIONAL SWITCHING CENTERS** The Part I end points providing interconnectivity for Part II end points and future Part II and Part III and other IRHTP end points.
- 36.1.26. **RESPONSE** Refers to the time expended from receipt of trouble, through the testing process and dispatch of the repair technician if required.
- 36.1.27. **RFP Request** for Proposal.
- 36.1.28. **“SHALL”** Is always mandatory.
- 36.1.29. **SINGLE MODE** Single mode designates an optic fiber which passes only the fundamental or lowest order mode at the light wavelength of interest (namely, 1310nm and 1550 nm for this RFP)
- 36.1.30. **SITE Connection** within or adjacent to a new IRHTP end point.
- 36.1.31. **SONET** Synchronous Optical Network is an American and international transport system utilizing the STS - 1 (Synchronous Transport Signal, level 1) as a root base.
- 36.1.32. **SONET LIGHTWAVE SYSTEM** A digital (SONET based) network element consisting of OC-(n) fiber optic transmission equipment, fiber facilities, batteries, rectifiers, alarm system, and capable of being independently switched and utilizes the overhead for control.

SECTION 2 - Special Construction

1. General

- 1.1. Procedures outlined below are not intended to fully cover all special procedures or emergencies which may arise during construction but are offered as an aid to Contractor in planning work; Contractor will cooperate with City, Hospitals, Schools, and Engineer to minimize inconvenience, construction delays and interruptions to continuous operation of existing fiber facilities.
- 1.2. Determine location of all underground utilities before starting excavation work; locations of underground appurtenances are approximate and not guaranteed by IRHTP. (Reference 13.6, Responsibility of Contractor in PART 1 OF DETAILED SPECS)
- 1.3. Remove and replace all signs and other appurtenances that interfere with construction operations; replace damaged signs at no cost to IRHTP.
- 1.4. Limit construction operations to all provided property, rights-of-way and easements. Provide barricades, lights, signs and detours as necessary to reroute traffic around construction areas. **(Inclusive of 17.0, Safety & 3.0, Right of Way in PART 1 OF DETAILED SPECIFICATIONS.)**
- 1.5. Arrange with operating utilities for relocation or temporary removal of utilities in conflict with construction and for service needed during construction at no cost to IRHTP.
- 1.6. Dispose of materials removed during construction at locations as approved by Engineer.
 - 1.6.1. Dispose of waste products containing prescribed materials at approved landfill.
 - 1.6.2. Dispose of surfacing, broken concrete or rubble, excess excavated materials and spoil.
 - 1.6.3. Place excess excavated material at locations designated by Engineer.
- 1.7. Notify businesses and residents two days in advance, when construction will disrupt or block access to property.
- 1.8. Provide snow fence along boundaries of construction area as specified hereinafter and as directed by IRHTP Project Coordinator.
 - 1.8.1. Install snow fence when area is prepared for excavation; install on steel posts with maximum spacing of 8'; maintain until work is complete.
 - 1.8.2. Provide snow fence around all open trenches or open structures when left unattended.
 - 1.8.3. Provide snow fence to keep livestock away from construction activities.
- 1.9. Backfill trench as construction progresses.
- 1.10. Cleanup and provide surface restoration as work progresses.
- 1.11. Submit complete detailed construction procedure schedule after award of contract for planning, scheduling and controlling construction of project.
- 1.12. Contractor will be expected to provide adequate personnel and equipment to perform work within specified time of construction.

1.13. Extensions of contract period will be given consideration upon written request of Contractor; request must include valid supporting data and bona fide reasons for requesting extension; IRHTP expects work to be complete and ready for final acceptance within completion time specified.

1.14. Protect survey markers of lot corners.

2. Cooperation With Others

2.1. Advise all utilities prior to excavating in area where construction might affect underground gas, electrical, telephone, cable or water service.

2.2. Advise Telephone Company of proposed construction schedule as it relates to telephone service.

2.3. Advise Power Company of proposed construction schedule as it relates to electrical power.

2.4. Advise Gas Company of proposed construction schedule as it relates to gas service.

2.5. Advise Water Company of proposed construction schedule as it relates to water service.

2.6. Advise Cable Television Company of proposed construction schedule as it relates to cable television.

3. Continuity Of Existing Utility Systems

3.1. Prepare detailed construction procedure schedule after award of contract: show definite and positive action to be taken to minimize disruption to utility systems.

3.2. Meet with all utilities to determine operability of isolation to determine area for which service would be shut off for each utility.

4. Survey Markers

4.1. Contractor responsible for hiring registered land surveyor to inventory existing pipe, pins and registered survey lot corners disturbed by construction; land surveyor responsible for setting reference markers required to re-establish location of existing pipe, pins and registered survey lot corners; land surveyor will not be required to certify pins or pipe replace as being lot corners; replace all markers disturbed by construction including where more than one pipe, pin or other marker are present at a location, replace all markers in same location as removed; provide drawing to IRHTP showing locations where markers were found and reset; dimensional data not required on drawing; each pipe, pin or marker replaced must be the identical marker removed at that location

5. Contaminated Soil Finds

5.1. If during course of construction evidence of deposits of contaminated soils are found, cease operations affecting find and notify IRHTP who will notify Iowa Department of Natural Resources; no further disturbance of deposits will ensue until notification by IRHTP that work may proceed; IRHTP will issue notice to proceed only after contaminated soils have been identified and procedures for remedial action have been determined and approved by Iowa Department of Natural Resources and IRHTP; compensation to Contractor, if any, for lost time or changes in construction due to changed conditions will be in accordance with change order provisions of specifications.

6. Payment

- 6.1. No separate payment will be made for work covered under this part of the specifications.
Include all costs in appropriate unit prices.

SECTION 3 - Excavation And Backfill

1. General

- 1.1. Excavation for trenches as specified herein; provide pipe/fiber as specified and shown on Standard Drawings for pipe/fiber installation.
- 1.2. Protect existing pavement from damage during construction if not shown on plans for removal; if damage occurs, replace in kind at no cost to IRHTP.
- 1.3. Remove, replace and repair items such as fences, storm drains, signs, hanging wires and other obstructions to accommodate construction equipment or to facilitate excavation; cost to remove and replace is incidental to construction.
- 1.4. Haul away and stockpile excavated material suitable for backfill; haul remainder of excavated material to an authorized waste site.
- 1.5. Remove soil not suitable for backfill; waste at disposal area specified in PART 2, SPECIAL CONSTRUCTION, Section 1.6 & 5.0; removal is incidental to construction, include cost in unit prices.
- 1.6. Where new work crosses existing utilities or utility services, excavate in advance of construction; determine crossing arrangement including exact construction line and grade. As specified in PART 1 - GENERAL REQUIREMENTS, Section 13.4 - 13.6, Responsibilities of Contractor.
- 1.7. Bore or jack under existing streets, utilities and structures except as noted on plans or as modified by IRHTP Project Coordinator.

2. Definitions

- 2.1. Earth: all materials including clay, silt, sand, gravel, hardpan, rock, shale, debris, junk, and brick, which can be removed by use of suitable excavating equipment and pneumatic tools.

3. Excavation For Structures

- 3.1. Includes excavation for manholes and other appurtenances.
- 3.2. Excavate as required to firm, undisturbed soil for laying conduit. In the case of hand holes/manholes excavate six (6") inches below bottom of structure and fill with six (6") inches of ¾" river rock at no expense to IRHTP.
- 3.3. Provide sheeting, shoring, and bracing where required to hold walls of excavation or to protect existing structures or utilities.
- 3.4. When unstable material is encountered which will not, in opinion of IRHTP Project Coordinator, provide suitable foundation, remove and replace with granular stabilizing material as directed by IRHTP Project Coordinator in writing, cost incidental to construction.

4. Trench Excavation

- 4.1. Keep width of trench as narrow as possible and still provide adequate room for backfilling and jointing.
- 4.2. Keep sides of trench as nearly vertical as practicable; comply with federal and state safety regulations.
- 4.3. Maximum desirable width of trench at top of fiber; as shown on Standard Drawings.
- 4.4. Excavate by hand:
 - 4.4.1. Under and around utilities.
 - 4.4.2. Where overhead clearance prevents use of machine.
 - 4.4.3. To protect trees and shrubs where shown on plans.
- 4.5. Remove top 18" of topsoil and store in segregated stockpiles for backfill prior to trench excavation.
- 4.6. The trench shall be as straight as practical. The bottom of the trench shall be smooth and free from any sharp edges. The trench shall be kept clear of debris and loose rock. All changes in trench grade shall be gradual.
- 4.7. The length of open trench shall not exceed 100' feet at the end of each working day. Any open trench, bore pit, or pothole shall be fenced, covered or otherwise barricaded to protect the general public at all times. Exceptions are subject to approval by the IRHTP. Good judgment and care must be exercised to prevent persons from falling into the open trench, or other damages

5. Rock Sawing

- 5.1. Solid rock is defined as a consolidated rock that cannot be plowed to specified depth. Frozen ground is not considered solid rock.
- 5.2. Where solid rock is encountered, the cable will be protected by steel, PVC conduit, high-density polyethylene conduit (HDPE) at the discretion of the IRHTP or its authorized representative.

6. Rock Excavation (Not Recommended)

- 6.1. Use of explosives; submit detailed plans outlining all proposed blasting operations, locations, methods and use of mats and other safety measures.
 - 6.1.1. Obtain written approval from IRHTP and Engineer before using explosives.
 - 6.1.2. Provide Special Hazard Insurance covering liability for all blasting operations.
 - 6.1.3. Use thoroughly experienced demolition personnel.

7. Rubble Excavation

- 7.1. Rubble, as specified and defined herein, may be encountered along route.
- 7.2. Removal: as specified for rock.
- 7.3. Use of explosives: as specified for removal of rock.

8. Sheeting, Shoring, And Bracing

- 8.1. Minimum shoring requirement; equivalent construction procedure to use of “sand box” to provide 8’ vertical protection; provide stacked sand boxes as required to maintain construction within construction limits.
- 8.2. Construct sheeting, shoring and bracing to hold walls of excavation where shown on plans or at other locations, to provide safety for workmen, to protect existing utilities or structures or to permit construction in the dry, sheeting operations which in the opinion of IRHTP Project Coordinator cause excessive vibration will not be allowed.
- 8.3. Leave sheeting and shoring in place when removal, in the opinion of IRHTP Project Coordinator, might damage new facility, existing utilities or structures.
- 8.4. Sheeting, shoring and bracing is incidental to construction; include cost in appropriate unit cost.

9. Dewatering

- 9.1. All work must be done in a dry environment; obtain IRHTP Project Coordinator’s approval on methods of dewatering.
- 9.2. Provide for handling of water encountered during construction.
- 9.3. Lay no pipe/fiber in or pour no concrete on excessively wet soil.
- 9.4. Prevent surface water from flowing into excavation; remove water as it accumulates.
- 9.5. Divert stream flow away from areas of construction.
- 9.6. Do not pump water onto adjacent property without approval of IRHTP Project Coordinator.
- 9.7. Dewatering is incidental to construction; include cost in appropriate unit cost.

10. Existing Utilities

- 10.1. Hold a preconstruction meeting 3 days prior to beginning construction. Document meeting with a sign-in sheet detailing names, addresses, phone & fax numbers of company representatives present. Take minutes of meeting and hand documentation in with as built package.
- 10.2. Locations of utility lines, mains, cables and appurtenances are the responsibility of contractor; confirm locations of underground utilities by excavating ahead of work; Contractor fully responsible for damage to utilities during construction.
- 10.3. Protect services during construction.
 - 10.3.1. If utility services are in direct conflict with line and /or grade of new facility; notify IRHTP immediately; provide all necessary shut-down, repair, and relocation where conflicts occur; furnish labor, equipment, pipe and fittings; repair and relocation will be paid by contractor; when broken due to carelessness, repair is incidental to construction.

10.3.2. Support and protect, by timbers or other means, all utility pipes, conduits, poles, wire and other apparatus not to be moved; protective measures subject to approval of IRHTP Project Coordinator.

10.3.3. No utility or utility service will be moved to accommodate equipment employment; method of operation or for convenience of Contractor when utility or utility services does not conflict directly with line and grade of work.

11. Tree Removal

11.1. Remove trees only in conflict with alignment of trenches or location of structures.

11.2. Removal includes grubbing and removing stump and roots, removal from site, disposal of debris and backfilling.

11.3. Tree and bush removal is incidental to construction; include cost in applicable unit price.

12. Backfill For Structures

12.1. Backfill after concrete, masonry, or glue has cured, and waterproofing, if specified, has been inspected and approved by Engineer.

12.2. Backfill with material removed from excavation; use no debris, frozen earth, large clods, stones or other unsuitable material.

12.3. Backfill simultaneously on all side of structure; save structure from damage at all times.

12.4. Terminate at original grade or at elevation shown on plans; dispose of excess excavation as directed by Engineer.

12.5. Prepare backfill for surface restoration as specified for adjacent trench.

13. Trench Backfill

13.1. Backfill trench immediately after contractor has recorded sequence marking on cable or location of connections and appurtenances or at IRHTP Project Coordinator's direction; backfill with select material excavated from trench.

13.2. Use no large stones, large clods, organic matter, rubbish, frozen or unsuitable materials in backfill; furnish extra soil from site to complete backfilling at no extra cost to IRHTP; remove and dispose of unsuitable material; backfill simultaneously on both sides of pipe to prevent displacement.

13.3. Hand place and carefully compact backfill to 1' over top of facility.

13.4. Backfill 1' over top of facility in layers not to exceed 18"; where compacted backfill shown on plans, compact to minimum 95% maximum density.

13.5. Backfill above PVC pipes:

13.5.1. Backfill with pipe bedding material to minimum 6" above top of pipe; do not drop pipe bedding material from equipment bucket more than 2' above pipe; all pipe bedding material including backfill material is incidental to construction.

13.5.2. Above pipe bedding material, backfill with excavated material, except frozen material, shale, and other non-suitable material; do not drop backfill material from

equipment bucket more that 2' above bottom of trench until backfill material is in place 18" above bedding backfill material.

13.5.3. Consolidate bottom 6" of trench backfill with hand tools and tampers; do not use vibratory plate compactor until above bottom 18" of trench backfill.

13.5.4. Cable marking ribbon shall be installed above all trenched direct-buried HDPE/conduits. The ribbon shall generally be placed at a depth of 12" inches below grade and directly above the fiber/HDPE/conduits.

13.5.5. Splice boxes/hand holes will be placed at all splice locations. Hand holes will be placed at intervals of approximately 1000' feet, change of direction, greater than 15% and as shown on construction drawings and typical drawings. Hand holes may be moved to locations more practical when necessary upon approval by the IRHTP.

14 Surface Restoration

14.1. All trenches: replace 18" of topsoil removed during excavation.

14.2. Grade tops of trenches to smooth, uniform lines without large lumps, clods or debris.

14.3. Dispose of all brush and rubbish as directed by IRHTP Project Coordinator.

14.4. Sod/seed all areas disturbed by construction unless otherwise shown on plans or as directed by IRHTP Project Coordinator.

14.5. Prepare site for seeding by disking, harrowing and had raking or other means following site grading; work soil to depth of 3".

14.6. Precede seeding with uniform application of commercial grade fertilizer at rate per acre of 20 lbs. of nitrogen, 40 lbs. of phosphorous and 20 lbs. of potassium (400 lbs. of fertilizer grade 5-10-5 per acre, or approved equal); cultivate area 3" deep and work with harrow within 24 hours before seeding; smooth surface to eliminate clods and lumps before seeding.

14.7. Seeding in street parkings, lawns and developed areas (Type 1):

14.7.1. Seed at rate of 85 lbs. per acre with following mixture proportioned by weight.

SEEDING	PERCENT
Kentucky Bluegrass	35%
Annual Rye	25%
Perennial Rye	20%
Creeping Red Fescue	10%
Chewing Fescue	10%

14.8 Seeding in City rights-of-way, railroad rights-of-way, pastures, farm fields and creek banks (Type 2):

- 6.2. 14.9 Seed at rate of 1.25 lbs. per 1000 SF with the following mixture proportioned by weight:

SEEDING	PERCENT
Brome grass	60%
Alfalfa	20%
Red Clover	12%
Alsike Clover	8%

- 14.10 Add rye to seed mixture at rate of 1 bushel per acre if seeded between August 15 and October 15; add oats at rate of 1-1/2 bushels per acre if seeded between April 1 and May 30.
- 14.11 Inoculate alfalfa and clover seed not more than 8 hours before sowing.
- 14.12 Seed between dates of August 15 and October 15 or between dates of April 1 and May 30.
- 14.13 Cover seed by rolling with cultipacker, or by dragging or hand raking.
- 14.14 Mulch all seeded areas: mulch: dry oat straw at rate of 4000 lbs. per acre; stabilize mulch with tiller designed to anchor mulch to soil.
- 14.15 Water seeded area sufficiently to saturate seed bed; continue watering all areas until growth is established.
- 14.16 Contractor is responsible for turning over to IRHTP full stand of grass; replant or redevelop bare spots or areas not attaining full stand of grass during first growing season.
- 14.17. No separate payment will be made for work covered in this part of the specifications. Contract unit prices shall include all cost for restoral.

15. Street & Driveway Replacement

- 15.1 Replace surface with new surfaces to match construction for type, size and surface texture unless otherwise specified.
- 15.2 Gravel or crushed stone:
- 15.2.1 Place 6" compacted crushed stone in top of trench; conform to IDOT Class A crushed stone; place and compact in two lifts.
- 15.2.2 Place additional compacted crushed stone beyond trench limits to widths shown on plans to restore to existing conditions; minimum thickness: 2".
- 15.2.3 No separate payment will be made for work covered in this part of the specifications.

16. Field Drain Lines

- 16.1 Field drain lines may be encountered along route of new sewer; notify IRHTP Project Management if drain conflicts with facility construction.
- 16.2 Where new facility crosses under field drain lines, replace with a length of Schedule 40 PVC pipe; match size of existing drain line; cut 1/8" to 1/4" wide slots at 12" centers transverse to pipe for slots on bottom; replacement paid for by contractor.
- 16.3 Where new facility parallels field drain lines, replace damaged field drain lines; match size and material of existing drain line.
- 16.4 No separate payment will be made for work covered in this part of the specifications.

17. Fence Removal And Replacement

- 17.1 Remove fence for construction access as required within easements.
- 17.2 Miscellaneous fence removal and replacement is incidental to construction; restore fence to original or better condition; replace wooden fence posts with new posts unless directed otherwise by Engineer.
- 17.3 No separate payment will be made for work covered in this part of the specifications.

18. Directional Boring

- 18.1 This includes all labor, equipment, and materials to install a minimum of one 1-1/4 inch diameter HDPE using directional boring techniques. The running line of the duct shall be kept straight and level unless otherwise specified in the final construction drawings. Any changes, either vertical or horizontal, shall be gradual and not to exceed 1.5' deviation in less than 6" (inches). Special care shall be taken to insure that the duct connection between bores be kept straight and level. When installing inner-ducts, conduits shall be color coded or marked to aid in identifying the respective ducts. This color-coding shall be observed during connection to assure duct continuity.
- 18.2 This unit also includes any pothole excavation for whatever purpose along with the pothole restoration. The barricading and safeguarding of pothole excavations shall comply with **BACKFILL & EXCAVATION** section. Backfill and restoration of excavation shall comply with Federal, State or local governing agency requirements.
- 18.3 Entrance of HDPE conduits into manholes and hand holes/splice boxes shall be in a level and straight line to facilitate installation of fiber optic cable.
- 18.4 Every effort shall be made to maintain a minimum of twelve (12") inches of clearance between IRHTP conduit and other utilities.
- 18.5 The boring machine shall be grounded at all times during operation. The grounding method shall comply with the manufacturer's guidelines and requirements. Adequate barricades shall be erected to limit access to boring machine operation personnel only.

19. Payment

- 19.1 No separate payment will be made for work covered in this part of the specifications. Include all costs in appropriate unit prices.

SECTION 4 - Pipes And Structures

1. Pipe Materials

- 1.1. Polyvinylchloride pipe (PVC):
- 1.2. Steel casing pipe: 0.25" under roadway; use for casing pipe where shown on plans.
- 1.3. HDPE
- 1.4. Plenum raceway

2. Pipe Joints

- 2.1. Polyvinylchloride (PVC) schedule 40: couplings and/or integral bell.
- 2.2. HDPE connectors: approved by the manufacture.
- 2.3. Steel pipe
- 2.4. Plenum connectors approved by the manufacture.

3. Joint Protection & Inspection

- 3.1. Carefully protect joints from injury while handling and storing pipe.
- 3.2. Use no deformed, gouged or otherwise impaired joints.
- 3.3. Clean bell and spigot surface of dirt and foreign matter before jointing pipe.
- 3.4. Use cleaner or primer.
- 3.5. Make joints in strict accordance with manufacturer's recommendations.

4. Pipe Installation

- 4.1. All inner-duct, HDPE or conduit shall be tagged or color-coded.
- 4.2. Before laying pipe, verify all measurements at site; make necessary field measurements to accurately determine pipe make-up lengths or closures.
- 4.3. Keep pipe free of all dirt and foreign material
- 4.4. Use no defective pipe; check each length for defects and hairline cracks at ends prior to lowering into trench.
- 4.5. Lower pipe carefully into trench.
- 4.6. Pull joints together with equipment recommended by pipe manufacturer; do not use backhoe or similar equipment to push joints together.

5. Connections Between Dissimilar Pipe

- 5.1. Provide manufactured adaptor or coupling.

6. Pipe Conflicts

- 6.1. Where pipe parallels an existing facility maintain at least 1 foot of separation.
- 6.2. Where pipe crosses an existing facility maintain at least 1 foot of separation.
- 6.3. Provide all necessary shut-down, repair and relocation of existing facilities where conflicts occur; furnish labor, equipment, pipe and fittings; repair and relocation will be

paid by contractor. When existing facility is damaged to carelessness repair is incidental to construction.

6.4. Conflicts as specified in EXCAVATION AND BACKFILL.

7. Tracer Wire Installation

- 7.1. Tracer wire shall be placed with all HDPE conduit installed unless armored or traceable cable is used. The tracer wire shall be provided by the contractor. The contractor that installs the HDPE conduits shall install, splice, and test (for continuity) the tracer wire. If the tracer wire is not placed or is broken during installation, the contractor shall notify IRHTP Project Management immediately. The area of the route that does not have tracer wire installed shall be identified on the as built documents submitted by the contractor. IRHTP will have the tracer wire installed by the subcontractor that installs the fiber optic cable or by other means. If the tracer wire is installed by a contractor other than the contractor that installs the HDPE conduits, the IRHTP will charge the HDPE installation contractor reflecting IRHTP cost to have the tracer wire installed.
- 7.2. On multi-duct installation install a 5/8" x 8' copper clad ground rod in the hand hole located on public r/w. Place a #12 insulated copper locate wire from the ground rod to the FOTS room or to the outside of the building directly below the pull box and terminated on one side of a Reliance 5533 insulated indoor/outdoor terminal block with copper connectors. Run a #12 copper wire from this terminal block to the master ground bar in the FOTS room or place a ground rod on the outside of the building. Locate block in an accessible location. This is for locate "purposes only". This is not for grounding purposes. Note on as-built where ground is placed and tag locate wire as "locate wire".

8. Proofing The Duct

- 8.1. All inner-duct, conduit/multi-duct will be proofed upon completion to verify continuity and integrity of the duct by pulling a solid rubber mandrel or a mandrel of other solid material such as steel or aluminum. The mandrel shall be at least 6" long and 1" in diameter. An IRHTP representative must be present to witness all duct proofing operations, duct that is not proofed in the presence of an IRHTP representative shall not be considered complete. The preinstalled mule tape of polypropylene rope may be used for this purpose but the tape or rope must be reinstalled upon completion of proofing. The reinstalled tape or rope must be free of damage, equal to its original integrity and free of other defects that would render it unsuitable for cable pulling.

9. Multiple Duct Installation

- 9.1. This item includes all labor, equipment and certain materials required to install four (4) 1.25" I.D. HDPE conduits in controlled access roadways and other locations as provided by in the utility accommodation policy. The HDPE conduits will be of different colors and will be plowed in place in such a manner that the duct to contain the IRHTP cable will be on top. The duct containing the IRHTP cable will be pre-inserted with a .25" nylon rope. All ducts shall have continuity. Refer to Appendix 1.17 on Sleeves.
- 9.2. Hand holes will be installed every mile to facilitate pulling, preferably at highway mileposts. However, hand holes may be moved to locations more practical when necessary upon approval by the IRHTP. All ducts shall enter and exit the hand holes. Should mid-assist points become necessary when pulling the cable, the ducts shall be

spliced together in a watertight condition. Upon completion of cable placement hand holes will be duct plugged and gopher proofed.

10. Manholes/Hand Holes

- 10.1. Use non-shrink grout between pipe and manhole block out.

11. Payment

- 11.1. No separate payment will be made for work covered under this part of the specifications. Include all costs in applicable unit prices for items to which work pertains.

- 11.2. Pipe in Place, LF:

11.2.1. Unit price includes furnishing pipe, handling, laying pipe bedding if required, materials, trench excavation, dewatering, connections between dissimilar pipes, connections to existing system, connections of existing pipes and appurtenances, sheeting, shoring and bracing, backfilling, service connections, tree and brush removal, surface restoration including seeding, fencing, and miscellaneous associated work.

11.2.2. Length will be measured along centerline of pipe with no deduction for manholes, including manholes.

- 11.3. Standard Manholes, Each Unit price includes furnishing, installing, excavating, concrete, frame and cover, connections of or to existing facilities, backfill and miscellaneous associated work for manholes 0 - 10' deep.

11.3.1. Diameter of manhole as shown on plans as specified.

- 11.4. Hand holes, Each Unit price includes furnishing, installing, excavating, frame and cover, connections of or to existing facilities, backfill and miscellaneous associated work.

12. Bedding Requirements

- 12.1. Bedding for manholes/hand holes: lay manholes/hand holes on 6" deep bedding material (3/4" river rock); fill around perimeter of manholes/hand hole to minimum depth of 6" deep bedding material (3/4" river rock). Compact all bedding material by vibration.

SECTION 5 - Specifications For Buried Installation Of Fiber Optic Cable

1. General

- 1.1. This specification covers the buried installation of a fiber optic cable by various methods for the IRHTP Network. Methods of direct burial are plowing, trenching or boring. Sections designated by the Contractor and crossings such as roads and streams shall be installed with external protection as specified herein. Installation of hand holes for use as pull boxes and splice boxes is covered herein, as is any work required at regenerator sites.
- 1.2. As required, the cable shall be removed from the reel by approved methods and pulled through the pipe crossings or under other utilities and replaced on the reel to continue the installation operation. The cable will be installed in various lengths up to 12 kilometers as determined by the Contractor.
- 1.3. Hand holes will be installed per the applicable Standard Drawing at intervals or locations called for in the specifications or drawings. Bends of small radii and twists that might damage cable shall be avoided. During the placing operation, cable shall not be bent in a radius less than 20 times the outside diameter of the cable.

2. Material

- 2.1. IRHTP Compatible/Specified Material: Contractor will furnish the materials listed below:

- 2.1.1 Armored Fiber Optic Cable meeting SMF-28/GR/253 fiber specifications
 - Single Jacket
 - Loose Tubes, Three tubes of 12 fibers each (Dri-Core)
 - 36 total fibers
 - Color coded Buffer Tubes
- 2.1.2 Non-Armored Cable (Kevlar)
 - Kevlar Cable must be in duct and must include a #10 AWG tracer wire inside the duct.
- 2.1.3 All rack mounted bulkheads or FDP's shall be equipped with SC style connectors
- 2.1.4 Warning Tape
- 2.1.5 Hand Holes
- 2.1.6 S.I.P. Peds
- 2.1.7 Sign Post & Signs
- 2.1.8 Ground Rods & Clamps, Bare #6 Wire
- 2.1.9 PVC Pipe - Schedule 40
- 2.1.10 GIP
- 2.1.11 BIP
- 2.1.12 Cable Lubricant
- 2.1.13 Pulling Rope - 600 lb test

3. Definition Of Terms

- 3.1. Road Gravel. Material used for restoration of all gravel surfaces shall conform to IDOT spec. 4120, Class A road stone, Standard Specifications for Highways and Bridge Construction.
- 3.2. Erosion Control Fencing. Erosion control materials must conform to Section 4169 of the Standard Specifications for Highway and Bridge Construction.
- 3.3. Rip Rap. When riprap is needed it shall be Class "E". It shall conform to IDOT spec. 4130 Rip Rap Standard Specification for Highway and Bridge Construction.
- 3.4. Pea Gravel. Pea gravel used for bedding under manholes shall comply with IDOT Spec. 4131 Porous Backfill Standard Specifications for Highway and Bridge Construction.
- 3.5. Asphalt. Material used for asphalt restoration shall conform to IDOT Spec. 4126 of Standard Specifications for Highway and Bridge Construction.
- 3.6. Concrete. Concrete for sidewalk, curb and gutter replacement shall be class "C" 3000 lb. and shall conform to IDOT Spec. 2403 of Standard Specifications for Highway and Bridge Construction.
- 3.7. Cable Lubricant. Contractor shall supply a cable lubricant approved by the Contractor for installation of fiber optic cable.
- 3.8. Pulling Rope. Contractor shall supply pull rope with 600 LB proper tensile strength.
- 3.9. Bridge Attachments. Pipe for bridge attachments shall be hot-dipped galvanized rigid steel. Attachments to steel bridges will be accomplished by the use of approved galvanized beam clamps and hangers. Drilling steel bridge structures is not allowed. The attachment to concrete bridge structures will be accomplished by the use of expanding anchor bolts in drilled holes. The use of driven or explosive set anchors will not be permitted when not shown on plans. Exposed ducts shall be supported at intervals of 6' or less. Approved expansion joints will be installed at all bridge structure joints and in no case will exceed 100 LF intervals. Weep holes of 1/4" diameter will be drilled at 20' intervals, and 12" above ground level.
- 3.10. Duct Plug. Contractor shall supply a "JACKMOON PLUGS" blank plugs and Simplex to seal all conduit and casing openings.
- 3.11. Hardware Cloth. Contractor shall supply 2" x 2" mesh - 19-gauge wire for use over pea gravel and under manholes.

4. Protection Of Material

- 4.1. Contractor shall be responsible at all times for protecting the exposed portions of the cable from damage, including intrusion of water. Cable ends will be left at splice locations with sufficient protection to prevent water from entering the cable ends. The contractor shall replace or repair at the IRHTP's option, and damage that occurs to the cable as a result of insufficient or improper protection of the cable.

5. Reporting Cable Damage

- 5.1. The cable shall be carefully inspected by the IRHTP during the plowing or trenching operation prior to its installation in the project to be certain that it is free from defects. Cable damage due to the contractor negligence will be the responsibility of the contractor. Every instance of damaged cable observed at any time shall be immediately called to the

attention of the Contractor; whether prior to installation, during construction, or during test or observation subsequent to installation. The method of repair or correction of such damage shall be in accordance with the written instructions of an authorized IRHTP's representative. The contractor shall make repairs or corrections promptly.

6. Cable Repairs

- 6.1. Minor damage to the outer jacket of the cable observed prior to or occurring during construction shall be repaired in accordance with instructions from an authorized IRHTP's representative.
- 6.2. Cable damage in excess of minor damage to the outer jacket, which is observed prior to or during construction, shall be corrected as follows:
 - 6.2.1. The damaged section of cable shall be enclosed in (1) a buried housing located as specified by the IRHTP or in (2) a buried cable splice enclosure if approved by the IRHTP, buried to the same depth as that specified for the cable. If the shield has been broken or the conductor insulation damaged, the cable shall be restored to the equivalent of new condition. This may require cutting out the damaged section of cable if required by the IRHTP. It may also require the replacement of an entire section between two existing hand holes. Determination of the method of correction will be at the IRHTP's sole discretion.
- 6.3. Damage to cable discovered after burial, either through test or observation, shall be repaired as follows:
 - 6.3.1. The damaged section of the cable shall be repaired as approved by the IRHTP. This may require cutting out the damaged section and replacing it with a short section of new cable with splices made in (1) buried hand holes or (2) buried cable splice enclosures, if approved by the IRHTP, which are buried to the same depth as required for the cable. It may also require the replacement of an entire section between two splice points. Determination of the method of correction will be at the IRHTP's sole discretion.

7. Depth Of Burial (Refer To Appendix 1.18)

- 7.1. Except where otherwise specified, the cable shall be placed to a minimum depth of 36 inches unless otherwise approved by the IRHTP. Greater cable depth will be required at the following location.
- 7.2. Where cable route crosses roads, the cable shall be placed at a minimum depth of 48" below the pavement or 36" below the paralleling drainage ditch, whichever is greater; unless the controlling authority requires additional depth in which case the greatest depth will be maintained.
- 7.3. Where the cable route crosses railroad rights-of-way the cable shall be placed at a minimum depth of 60" below the railroad surface or 36" below the paralleling drainage ditch, whichever is greater; unless the controlling authority requires additional depth in which case the greatest depth will be maintained.
- 7.4. Where cable crosses existing sub-surface pipes, cables, or other structures. At foreign object crossings the cable will be placed to maintain a minimum of 12" clearance from the object or the minimum clearance required by the objects owner, whichever is greater.

7.5. Where cable crosses small gullies, ditches, and washes, the cable will be placed at a minimum depth of 48" below the flow line of the waterway unless IRHTP specifically waives this requirement. Such determination shall be made by the Contractor's field representative and recorded on the as-built drawings. In no case shall the cable be placed at less than the 36" minimum depth.

7.6. Where cable crosses large/major gullies, ditches, streams, rivers, washes or areas prone to flooding, the cable will be placed at a minimum depth of 10' below the flow line of the waterway unless IRHTP specifically waives this requirement. Such determination shall be made by the IRHTP field representative and recorded on the as-built drawings. In no case shall the cable be placed at less than the 36" minimum depth.

7.7. Additional cable depth required to satisfy the preceding items shall not be construed as Extra Work.

7.8. Where rock excavation is required, a minimum depth of the cable of 24 inches may be allowed, with IRHTP's written approval, when the cable has additional protection of Contractor-provided PVC or HDPE conduit. Otherwise, the minimum depth for placement in rock will be 36".

7.9. Where there is a layer of soil over rock, the minimum depth that the contractor may be allowed, shall be the shallower of: 1) the minimum depth of trench in rock, measured to the soil-rock interface; or 2) the minimum depth in soil, measured to the surface.

7.10. At other locations as may be specified by the IRHTP.

8. **Cable Marking Ribbon**

8.1. The cable marking ribbon shall be installed above all direct-buried cable and conduit. The ribbon shall generally be placed at a depth of 12 inches below grade and directly above the cable or conduit.

9. **Hand Holes (Splice Boxes)**

9.1. At all splice locations, hand holes will be placed as splice vaults. Hand holes may also be placed at the end of conduit runs to serve as pull boxes for the cable, at the option of the Contractor.

9.2. Hand holes will be set at all regeneration stations, at entrances to terminal stations, and at other locations required by the Contractor and/or shown on the drawings.

9.3. Hand holes shall be of the type shown on the applicable Standard Drawing. Hand holes shall be installed in accordance with the Standard Drawing.

9.4. Hand holes shall be spaced to allow sufficient length (75') of cable at each end of the reel to be coiled in the hand hole.

9.5. After placing the hand hole, contractor shall backfill to a level even with the top of the hand hole. The excavation shall be left in the above condition until after the splice has been completed by others. Upon notification by IRHTP that the hand hole is ready, the contractor shall complete the backfill of hand hole pit in accordance with the drawings and with Clause 22.0 of these Specifications.

10. Cable Plowing

10.1. General

- 10.1.1. The contractor shall be familiar with general guidelines covering the construction of buried communications cable.
- 10.1.2. The equipment and construction methods used by the contractor shall be such as to cause minimum displacement of the soil.
- 10.1.3. Damage to banks, ditches, driveways and roads caused by the equipment shall be immediately repaired to the satisfaction of the IRHTP and public authorities having jurisdiction over highway and road rights-of-way.
- 10.1.4. Where cable is buried near the edge of pavements, the contractor shall take particular care to avoid damaging the pavement. If such damage does occur, repairs shall be made immediately to meet the complete satisfaction of state or local authorities having jurisdiction over the pavement.

10.2. Plowing Equipment Requirements

- 10.2.1. The plowing equipment shall be subject to the approval of the Contractor and the public authorities having jurisdiction over highway and road rights-of-way.
- 10.2.2. Plowing shall be performed by a prime mover with hydrostatic type steering and a static plow.
- 10.2.3. The design of the plowshare shall be such that the buried cable passing through the plow will not bind and shall not be bent in a radius less than 20 times the outside diameter of the cable. The feed chute must be a removable gate for the purpose of inspection and to allow the cable to be removed from or inserted into the feed chute at any intermediate point between splice locations. The cable path inside the feed chute must have low friction surfaces and be free of burrs and sharp edges to prevent damage to the cable as it passes through. Any welds must be smoothed. Internal guide rollers shall not be used.
- 10.2.4. The equipment shall be capable of extending the plow in order to maintain the required minimum depths under all terrain conditions.
- 10.2.5. The reel carrier shall be of adequate size and be configured so that the reel sizes being used can be safely handled.

10.3. Plowing Requirements

- 10.3.1. The slot made in the soil by the cable plows shall be closed immediately by driving a vehicle track of sufficient weight over the plow slot, to thoroughly compact the plow slot or by other suitable means approved by the Contractor.
- 10.3.2. Start and finish pits and pits at points of intersection, as needed must be excavated in advance of plowing cable. Ends of casings and crossings of foreign utilities shall be exposed prior to start of cable plowing operations.
- 10.3.3. The contractor shall exercise particular care in the use of trenching equipment and shovels in joining trenches to the slots made by the plow to be certain that the cable is not damaged.

- 10.3.4. To avoid possible damage to buried cable from exposure to traffic, livestock and other hazards, trenching of laterals, trenching around culverts, construction of aerial inserts and similar operations shall be completed as soon as practicable behind the plowing operation, but never more than 48 hours behind the plowing operation unless additional protective measures, as approved by the contractor, are employed. Notwithstanding this provision, the contractor remains responsible for the cable throughout the placing and acceptance intervals.
- 10.3.5. Care is to be exercised during the plowing operation, to feed the cable into the ground through the plow loose and at no tension. Equipment and construction methods shall be such as to assure compliance with this requirement. The contractor shall furnish competent supervision at all times at the site of plowing operations to assure compliance with this requirement.
- 10.3.6. If during the plowing operation, the plow should strike a buried object or rock that stops the equipment and necessitates removal of the plow from the ground, the precautions detailed in Section 9.4 shall be observed to avoid damage to the cable. Should it be necessary to back the plow to remove it from the ground, the cable shall be uncovered by hand a sufficient distance back for inspection by the IRHTP to determine whether the cable has been damaged.
- 10.3.7. Where casing pipe or foreign utility is encountered, the cable shall be unrolled and placed in a figure 8 configuration. After the cable is pulled through the casing pipe(s) or under the foreign utility (ies), it shall be replaced on the reel and the plowing operation restarted. EXTREME CARE must be used whenever the cable is handled so that it will not be kinked or damaged in any manner.
- 10.3.8. The plowing precautions detailed in Section 9.4 shall be strictly observed.

10.4. Plowing Precautions

- 10.4.1. Failure to observe precautions concerning proper operation of the prime mover and plow contributes to unnecessary cable damages. The following precautions shall be reviewed with equipment operators and shall be strictly observed.
 - 10.4.1.1. The tractor shall always be started slowly and speed increased gradually after all cable slack is removed from the cable delivery system.
 - 10.4.1.2. Plow attitude and depth shall be changed gradually. Such changes shall be made only while prime mover is moving.
 - 10.4.1.3. Should it be necessary to raise the plow share to the surface when the plow is not moving, the cable to the rear of the feed chute shall be excavated and slack pulled so that the cable is not kinked over the feed chute exit.
 - 10.4.1.4. Do not plow with the share set at extreme forward rake angles without a share specifically designed for this purpose.
 - 10.4.1.5. When rigging for off-set plowing, the cable shall be re-routed over the cable feed systems to conform with the new configuration.
 - 10.4.1.6. Abrupt changes in terrain along the cable path shall be graded off ahead of the plow. Such grading must be approved by IRHTP and IDOT.

- 10.4.1.7. The plowing operation shall be observed continuously for obstructions, proper feeding of cable, maintaining proper depth, etc.
- 10.4.1.8. Under no circumstances shall the plow be backed or the share moved to the rear with cable in the chute.
- 10.4.1.9. At no time shall the plow be wobbled either vertically or horizontally to break through an obstruction.
- 10.4.1.10. At no time shall the plow deviate from the normal route to seek an "on grade" crossing level for farm roads. Unless the road is bored, contractor shall level the plow train path in order to make a level crossing of the road. Subcontractor shall repair the road after passage, including repaving or gravelling, as required
- 10.4.1.11. No practice will be allowed that will cause an abrupt change in direction of the plowed in cable.

10.5. Cable Plowing In Rock Areas

- 10.5.1. Solid rock is defined as a consolidated rock that cannot be plowed to specified depth. Frozen ground is not considered as solid rock.
- 10.5.2. Where solid rock is encountered, the cable will be installed by the trench method described in Section 10.0, while also being protected by steel PVC conduit, high-density polyethylene conduit (HDPE), at the discretion of the Contractor.

11. Placing Cable At Reel Ends

- 11.1. The cable will be placed to provide sufficient cable for splicing at ground level. This should be a minimum of 75 feet. Inside the regenerator station buildings, sufficient cable will be allowed to connect to the equipment.

12. Cable In Trench

12.1. Excavation

- 12.1.1. The trench shall be as straight as practicable. The bottom of the trench shall be smooth and free from any sharp edges. The trench shall be kept clear of debris and loose rock. All changes in trench grade shall be gradual.
- 12.1.2. The length of open trench shall not exceed 100' at the end of each working day. Any open trench shall be fenced. Exceptions are subject to approval by the IRHTP. Good judgment and care must be exercised to prevent livestock or persons from falling into the open trench.
- 12.1.3. Driveways, lanes, or roadways, which are open cut, shall be opened just prior to the conduit and/or cable placing. In no case shall the driveway, lane, or roadway be left impassable at the end of the day. The general public safety is paramount and appropriate steps shall be taken to ensure safety at all times.

12.2. Backfill

- 12.2.1. The trench shall be backfilled and compacted to the satisfaction of the IRHTP or local authorities, promptly behind the pipe and/or cable placing, except at splice

locations. In general, the backfill shall consist of the earth removed from the trench.

- 12.2.2. Where a carrier, pipe, conduit, duct, or cable is placed by trenched construction beneath a roadway or a driveway or within five feet of the edge of an existing or proposed pavement or base course, the backfill within the roadway shall be placed and compacted in not more than 6" lifts, from the top of the installation to the ground line. The backfill shall be of suitable material free from boulders, frozen clods or roots or excessive sod or other vegetation. The fill shall be carefully hand tamped under and around the installation in lifts not to exceed 4" in loose thickness.
- 12.2.3. In areas inaccessible to tamping-type rollers where compaction is required, a mechanical tamper of a size suitable for the work involved shall be used.
- 12.2.4. Pneumatic tampers shall be operated at pressures no less than those recommended by the manufacturer.
- 12.2.5. Compaction of backfill shall be to the satisfaction of the IRHTP, and consistent with good highway construction methods.
- 12.2.6. On public right-of-way all backfilling must conform to the requirements of the authority having jurisdiction.

12.3. Trenched Road and Driveway

- 12.3.1. Generally all hard surfaced areas will be bored. The backfill at crossings of driveways, lanes, or roadways shall be the same as 10.2.
- 12.3.2. Pavement replacement shall match existing paving in type of pavement appearance, wear surface, and durability to the maximum extent practical. Replacement shall match existing structure and shall include curbing, walkways, or any other concrete structure damaged during construction. Pavement repair shall be subject to approval by the IRHTP and must conform to the requirements of the local governing authority having jurisdiction including required cutbacks, or "T" topping. Pavement repair not installed in accordance with the requirements of these Specifications shall be removed and replaced.

12.4. Trench In Rock

- 12.4.1. See Section 9.5 for a definition of solid rock.
- 12.4.2. Where solid rock is encountered, the trench may be excavated using a rock saw or other rock cutting equipment. The excavation, backfill and road crossings in solid rock areas shall conform to sections 10.1, 10.2 and 10.3 of these specifications unless specifically exempted in this section.

12.5. Placing Cable

- 12.5.1. The cable will be placed to provide sufficient cable for splicing at ground level. This should be a minimum of 75 feet. Inside the regenerator station buildings, sufficient cable will be allowed to connect to the equipment.

13. Multiple Duct Installation

- 13.1. This item includes all labor, equipment and certain materials required to install four (4) 1.25" I.D. HDPE conduits in controlled access roadways and other locations as provided by in the utility accommodation policy. The HDPE conduits will be of different colors

and will be plowed in place in such a manner that the duct to contain the IRHTP cable will be on top. The duct that will contain the IRHTP cable will be pre-inserted with a .25" nylon rope. All ducts shall have continuity.

- 13.2. Hand holes will be installed every mile to facilitate pulling, preferably at highway mile posts. . However, when necessary and upon approval by the IRHTP, hand holes may be moved to locations more practical. The duct containing the IRHTP cable shall enter and exit hand holes and the empty ducts shall pass around the hand hole on the field side rejoining the IRHTP duct as soon as practical without causing severe bending.
- 13.3. Should mid-assist points become necessary when pulling cable, the ducts shall be spliced together in a water-tight condition. Upon completion of cable placement hand holes will be duct plugged and gopher proofed.

14. Cable Pulling

- 14.1. The optical fiber cable provides high capacity transmission channels. To ensure that the cable's qualities and characteristics are not degraded, excessive pulling tensions or excessively short bending radii should be avoided. The maximum pulling tension is 600 lbs. and the minimum bending radius is: dynamic (cable in movement) = 20 times outside diameter of the cable and static (cable in place) = 10 times outside diameter of the cable. These rules should be followed at all times when placing excess cable in hand holes for splicing and slack coils.
- 14.2. When pulling fiber, a break-away swivel, along with a Slip Clutch Capstan Winch that shows the dynamometer reading at all times shall be used.
- 14.3. Cable lubrication shall be used to reduce the pulling tension on longer segments of the cable placement operation. Contractor approved lubricants shall be used.
- 14.4. At each pulling hand hole a 35' coil of fiber will be left coiled in the bottom of the box. At each splice location 75' will be left on each cable end for splicing. Tags will be placed on fiber showing the direction of the cable. The cable ends will be sealed watertight to keep water from entering the cable.

15. Subsurface Obstructions

- 15.1. Contractor is responsible to locate and avoid all subsurface obstructions. It is the contractor's responsibility to verify the locations of subsurface obstructions shown on the drawings as well as any additional obstructions not identified on the drawings. Contractor shall notify owners and operators of foreign pipelines or other utilities at least 48 hours prior to excavation near the utility. Contractor shall keep a log of all telephone contacts to notify foreign utilities of excavation. Such log shall include date, time of day, name of individual contacted, name of Company contacted, telephone number, and confirmation number.
- 15.2. When crossing buried pipes, cables, and other utility lines, the cable shall be placed under the foreign utility line with a minimum separation of 12 inches. However, if the foreign utility line is 55 inches or more deep, the cable may be placed over the utility at the normal placing depth unless the utility owner specifically requires placing of facilities

below their lines. In this situation the new facilities will be placed a minimum of 12" below the existing line (see Section 6.0).

16. Inspection Of Buried Cable

- 16.1. The installed cable will be tested as a part of the cable splicing operation. Contractor shall be liable for the cost of any and all repairs or replacement necessary to correct any defect in the installed cable which can be attributed to actions by the contractor which are disallowed by these specifications, by the Cable manufacturer or by good industry practice, as determined by the IRHTP. The term "defect" as used in the preceding sentence shall mean any defect that the IRHTP determines to have an effect on current or future operations of the completed fiber optic communication system.

17. Highway, Railroad And Other Bored Crossings

- 17.1. All crossings of state or federal highways and railroads rights-of-way shall be made by boring and placing a pipe casing. The cable shall be placed through the pipe casing. Country roads and other roadways shall be bored, trenched or plowed, as directed by the IRHTP and approved by the appropriate local authority.
- 17.2. All work performed on public right-of-way or railroad right-of-way shall be done in accordance with requirements and regulations of the authority having jurisdiction there under.
- 17.3. At anytime the pipe casing bored under the roadway exits below the prescribed depth, a backhoe will be used to gradually return the bored ditch to plowed grade.
- 17.4. In no case shall the completed crossing be less than 48" deep at its shallowest point.
- 17.5. Certain roadways may be allowed to be crossed by trenching. In those cases, it shall be the contractor's option to split conduit and place it around the cable in lieu of placing whole conduit and pulling the cable through the conduit. Contractor shall split the casing and install it around the cable in a manner approved by the Contractor. Split conduit will be secured after cable placement in such a fashion as to prohibit collapsing to less than its un-split diameter. Split conduit shall be sealed or plugged to prevent entry of dirt, water and rodents.
- 17.6. In areas that the cable is being laid in conduit, the ends of the conduit shall be capped or plugged to prevent entry of dirt, water and rodents.
- 17.7. Under railroads rights-of-way, the bore shall extend from toe of fill to toe of fill.
- 17.8. In no case shall an encasement extend less than toe of slope to toe of slope except along freeway rights-of-way in which locations the encasement shall extend from right of way to right of way.

18. Stream And Canal Crossings

18.1. General

- 18.1.1. In general, the cable shall be placed by direct bury methods (plow or trench) with additional conduit protection when directed by the IRHTP, across small streams

and washes. Stream or river crossings may be made on non-freeways, through conduit attached to a highway or railroad bridge. Where required by local authorities, irrigation canals will be bored in the same manner as a road crossing.

18.2. Buried Crossings

- 18.2.1. Lake, canal, stream and river crossings shall be installed and restored in accordance with the Standard Drawings and the applicable Construction Drawings, and in accordance with the requirements of the permit, if any, and in accordance with the requirements of respective Federal, State and Local agencies, including those agencies concerned with water pollution and the protection of sport fisheries. Cable shall be laid across lakes, canals, streams and rivers as nearly level as practicable. Extreme care shall be taken to prevent damage to the cable during these installations.
- 18.2.2. The cable is to be installed in accordance with Clause 6.0, Depth of Burial. The banks of stream crossings shall be graded as necessary to provide the required burial depth under the stream and to provide a proper pathway for the plow train or trencher to traverse the bank and make a smooth transition to the stream bottom. Transitions from normal depth to stream-crossing depth shall be made smoothly without sharp bends in the cable. All cuts in banks and diversion berms shall be re-graded to match existing facilities and re-compacted to not less than 90% of maximum cf density at plus or minus 5% of optimum moisture content as determined by ASTM D698.
- 18.2.3. The banks of all canals, streams and rivers shall be restored to their former condition and bank protection materials or bulkheads will be installed where required. The methods of restoration and erosion control shall be as required by the landowner or agency having jurisdiction and as approved by IRHTP. IRHTP reserves the option to change the erosion control method in the field. Banks will be reseeded and mulched with grass seed and mulching material as required by the local governing authority. Berms will be constructed, where practicable, to divert water away from the trench line and disturbed bank areas. Costs for restoration of banks and installation of bank protection material and bulkheads shall be included in the price for completing the work.
- 18.2.4. As nearly as possible, the beds of all lakes, canals, streams and rivers shall be restored to their former elevation and grade, and spoil, debris, piling, cofferdams, false work, excavation, construction materials and obstructions resulting from installation of the cable shall be removed from the crossing to prevent interference with normal water flow and interference with any normal use of such canals, streams and rivers and shall be disposed of in a manner and at locations satisfactory to IRHTP. Underwater spoil shall be spread to a height not to exceed six inches above the bed of lakes, canals, streams and rivers.
- 18.2.5. Contractors shall not begin work on lake, canal, stream or river crossings before obtaining approval from the IRHTP.
- 18.2.6. It is the intent of these specifications to require contractor to install the cable underneath the bed of the lake, canal, stream, river or water course at a depth of ten feet below the flow line that shall prevent flood waters from affecting the cable by reason of the scouring action of the water. Particular attention shall be given to the

location of sag bends in the cable so that they shall be located back in the lake, canal, stream or riverbanks beyond any point that would be affected by a change due to erosion of the banks.

18.2.7. Contractor shall give all notices and comply with all laws, ordinances, rules and regulations bearing on the conduct of the Work as drawn.

18.2.8. Unless specified otherwise, at individual stream crossings, the contractor shall be required to:

18.2.8.1. Grade banks of stream crossings by pulling the spoil back from the bank. Subcontractor shall not push the spoil out into the stream to grade the approaches.

18.2.8.2. Refrain from the use of cofferdams or from diverting the stream in any way in order to construct a stream crossing.

18.3. Attachment to Bridges (Non-Freeway)

18.3.1. Pipe for bridge attachments shall be hot-dipped galvanized rigid steel. Attachments to steel bridges will be accomplished by the use of approved galvanized beam clamps and hangers. Drilling steel bridge structures is not allowed. The attachment to concrete bridge structures will be accomplished by the use of expanding anchor bolts in drilled holes. The use of driven or explosive set anchors will not be permitted when not shown on plans. Exposed ducts shall be supported at intervals of 6' or less. Approved expansion joints will be installed at all bridge structure joints and in no case will exceed 100 LF intervals. Weep holes of 1/4" diameter will be drilled at 20' intervals, and 12" above ground level.

18.4. Bored Canal Crossings

18.4.1. Irrigation canals requiring boring shall be bored in accordance with Paragraph 13.0, Highway, Railroad and Other Bored Crossings.

19. Cable Markers

19.1. Location

19.1.1. Cable markers will be furnished by the IRHTP and shall be placed within 48 hours of cable installation. Cable markers shall be placed at all change in directions, splices, fence line crossings, at road and stream crossings, and at other points on the route not more than 1,000 feet apart.

19.1.2. Cable markers shall be located as directed by the IRHTP.

19.1.3. In addition, on highway (non-freeway) right-of-way, the markers shall be located at the highway right-of-way line. Markers shall always be located so that they can be seen from the location of the cable.

19.1.4. In addition, in freeway right-of-way, the markers shall be placed not more than 1000 feet apart in rural areas and 500 feet apart in urban areas. Signs will be required on each side of all transversing public roads on streets at a point where the freeway right of way line intersects the transversing public road or street right of way line. Signs shall be placed within the right of way fence line, at line of sight.

20. Right-Of-Way Protection And Restoration

20.1. General

- 20.1.1. The contractor shall protect the right-of-way and minimize the damage from construction operation.
- 20.1.2. Good soil erosion practices shall be practiced during all construction operations.
- 20.1.3. Depending on the location of the work, the Federal Environmental Protection Agency, the State Environmental Protection Agency or others may stipulate construction practices and crew behavior requirements in or around environmentally sensitive areas, such as cultural resource sites. Contractor shall adhere to any such stipulated construction practices and crew behavior requirements.

20.2. Restoration

- 20.2.1. Contractor shall keep the premises where work is being performed in a neat, clean, and orderly condition, and on completion of the work hereunder, contractor shall remove from the premises all of its tools and equipment, and any debris shall be removed and disposed of by contractor.
- 20.2.2. The right-of-way shall be restored to its original or better condition within 24 hours or as soon as practicable, in the IRHTP's opinion, following cable placing operations.
- 20.2.3. Where the cable is plowed in place, restoration shall be accomplished by driving a tractor or heavy truck over the plow furrow until the plowed area conforms to the surrounding terrain. A vibratory roller having a weight of three tons and a width of 4-6' may also be used.
- 20.2.4. In areas where open trench methods were used and backfill mounded over the trench, grading or filling will be required for final restoration of the right-of-way.
- 20.2.5. All rock and debris brought to the surface and left after backfilling shall be removed and disposed of, as directed by the IRHTP.
- 20.2.6. Improved landscape, lawns, shrubs, and hedge removed or damaged on the right-of-way shall be replaced. Lawns shall be repaired by re-sodding with like grasses.
- 20.2.7. The contractor shall promptly repair or replace any other property damaged during construction.

21. Coexistence On Highway Right-Of-Way

- 21.1. The cable route will parallel public highways and the cable will be laid within the highway right-of-way.
- 21.2. All work performed on public road right-of-way shall be completed in accordance with requirements and regulations of the authority having jurisdiction. It is the contractor's responsibility to be aware of, and comply with, all regulations and requirements pertaining to his work. The contractor shall be familiar with the location of "scenic enhancement areas" and with special requirements for construction on highway rights-of-way in such areas.

- 21.3. Unless otherwise specified on the drawings or by the Contractor, the cable shall be installed as close as practicable to the highway Right-of-Way line. If terrain or man-made obstruction(s) block the route, contractor shall modify the route with approval of IRHTP and the proper governmental authorities to avoid the obstruction.
- 21.4. Generally, the cable shall be buried in accordance with section 6.0, Depth of Burial. At particular locations, the cable depth will be controlled by depths of the facilities crossed (i.e. drainage, bridge structures, buried cables and/or other facilities.)

22. Fencing

- 22.1. The temporary fencing erected around contractor's excavations located outside of city limits shall be type 47 field fence or as approved by IRHTP. Temporary fencing around excavations inside the city shall be installed utilizing safety fencing to the satisfaction of the IRHTP.
- 22.2. Contractor, having first ascertained from IRHTP that permission has been secured from the landowner and/or tenant, shall build suitable temporary fencing and/or wire gaps in the fences crossing the route of the cable and maintain the same so that livestock shall be prevented from entering or leaving the property. Before cutting such fences to make these gates, contractor shall brace the fence to prevent damage. Gates shall be so constructed that they can be securely closed, and where necessary contractor shall furnish a watchman to maintain gates to prevent livestock from entering or leaving property and shall also furnish watchmen in any instance where required to do so by Contractor. Such temporary fences or gates shall be provided with suitable fasteners and shall be kept closed at all times except when necessary to be opened for construction purposes.
- 22.3. Following the completion of the cable construction, temporary gates shall be removed. All fences which have been cut or removed during the construction work shall be repaired by contractor in a first class and substantial manner and to match the original style of the fence, so far as possible. Where there is any doubt in the opinion of the IRHTP as to the usability of old fence material, contractor, at its own expense, shall furnish new wire and suitable post to rebuild said fence. Fence repairs shall be subject to approval of both the property owner and IRHTP.

23. Building Specifications

23.1. Installation Requirements

- 23.1.1. Installation shall comply with the latest edition of The National Electrical Code and other national, state and local codes as applicable.
- 23.1.2. Pull boxes will be required after 180 degrees of directional change and after every 120 feet of vertical rise (10 floors). Pull boxes will be mounted securely to the building structure and will not depend on the conduit for support. Pull boxes shall have removable covers and will be installed in such as way that the covers will be accessible.
- 23.1.3. Relocating and/disconnecting of any existing equipment within the building shall be coordinated with building management.
- 23.1.4. All metallic conduits shall be bonded to the building ground system.

23.1.5. All conduits shall be sealed (plugged), after cable installation at the point of interface and will be clearly marked to facilitate location.

23.1.6. Pull boxes should be clearly marked "IRHTP" on the cover for identification.

23.2. Material Requirements

23.2.1. Materials will comply with those standards as established by UL or NEMA and shall be commercial grade. All materials will be new and free from defects.

23.2.2. Conduits shall be one and one quarter inch (1 1/4") EMT (Electrical Metallic Tubing). EMT fitting shall be gland or set screw type, and each conduit shall be equipped with a graduated pull tape or rope. The exact requirements for location of conduit within the building shall be verified with the building owner.

23.2.3. Large radius sweeps shall be provided where required for offset or change in direction of conduit. The minimum radius recommended is 36", and the minimum radius acceptable is 24". If it is not possible to provide 24" minimum radius sweeps, pull boxes providing the same radii capability will be required.

23.2.4. Pull through pull boxes will be typically 6" high x 6" wide x 24" long with the conduit entering at each end. Pull boxes shall meet code requirements and will generally be placed to improve ease of pulling cable and inner-duct.

23.2.5. The cable will be secured at pull boxes on vertical runs with IRHTP-approved split Kellum grip as determined by the IRHTP representative.

24. Splicing

24.1. Direct Buried Splices - At points where the IRHTP determines a buried splice should be placed, the contractor will excavate, secure, fence, and protect a splice pit to accommodate placing the cable splice (by others) at the same depth as the cable installation. The splice pit will be left open until the splice is completed at which time contractor will return and complete backfill and restoration work as required by the authority with jurisdiction in the area. Slack cable footage will be coiled and placed vertically in line with the cable route at sufficient depth that the highest point in the loop and splice closure is a minimum of 36" below the surface. The coil diameter will be a minimum of 30". The contractor shall backfill with selected fines to a level 6" above the closure and coil and continue the backfill as required.

24.2. Splicing at Hand holes - At points where branch splicing occurs, as shown on drawings, or directed by IRHTP, the contractor will place a hand hole as per the specifications and manufacturer's suggested methods. Contractor will secure, fence and protect the hand hole excavation and maintain a safe open pit to allow a splice to be completed (by others) and placed in the hand hole. After splice is placed, contractor will return and complete backfill and restoration work as required by the authorities with jurisdiction in the area.

24.3. At all splicing locations contractor shall also install a SIP 40 pedestal, an 8' ground rod and connect the two via a #6 ground wire. Contractor shall also install a 1-1/4" HDPE conduit at 36" depth between the hand hole/splice pit and the SIP 40 for use by others.

25. Concrete

25.1. Description

- 25.1.1. This section covers the material requirements and placing of Portland cement concrete for roadways, driveways, sidewalks and other planned concrete works.
- 25.1.2. Concrete shall consist of a mixture of Portland cement, water, fine aggregate, coarse aggregate and approved additives, when required, mixed in the proportions as specified below or approved by Contractor.
- 25.1.3. Where permits apply to Work, concrete shall conform to the permit requirements.

26. Material Requirements

26.1. Concrete Materials

- 26.1.1. Portland cement shall conform to the requirements of AASHTO M85 and shall be Type II (low alkali).
- 26.1.2. Aggregate shall conform to the requirements of the IDOT for the specific use.
- 26.1.3. Water used in mixing or curing shall be reasonably clean and free of oil, salt, acid, alkali, sugar, organic vegetation, or other substance injurious to the finished product. Water may be tested in accordance with and all requirements of AASHTO T-26. Water known to be of potable quality may be used without test.
- 26.1.4. Air-entraining mixtures, when required, shall conform to the requirements of AASHTO M-154 (ASTM C-260).
- 26.1.5. Reinforcing steel for concrete reinforcement shall meet Grade 60 requirements for of ASTM A-615. Welded wire fabric for concrete shall conform to AASHTO M-55 (ASTM A-185). All bars and welded wire fabric shall be properly bundled and tagged with weather resistant tags.
- 26.1.6. The Subcontractor shall submit a supplier's mix design and material certifications for the mix being supplied one (1) week in advance for review and approval. No concrete shall be used on the project before mix design has been submitted and approved.

26.2. Concrete Classes

- 26.2.1. Concrete shall be of the class specified and as appropriate for the item for which it is being placed. Water content shall be controlled to produce a slump between two (2) and four and one-half (4 1/2) inches.
- 26.2.2. Classes of concrete and minimum strength and cement content shall be as follows:
 - 26.2.2.1. Encasement Concrete. Class 3000 S&G shall be as sand/gravel mix with not less than 5.5 sacks (516 lbs) Portland cement per cubic yard to produce a twenty-eight (28) day compressive strength of 3000 psi. This class may be used for bedding concrete and encasement concrete in most locations.

26.2.2.2. Sidewalk and Driveway Concrete. Class 3000 CA shall be fine aggregate/coarse aggregate mix with not less than 5.5 sacks (516 lbs) of Portland cement to produce a twenty-eight (28) day compressive strength of 3000 psi. This class may be used for bedding, encasement concrete, sidewalks, and driveways.

26.2.2.3. Paving Concrete. Class 4000 CA shall be a fine aggregate/coarse aggregate with not less than 6.5 sacks (610 lbs) of Portland cement to produce a twenty-eight (28) day compressive strength of 4000 psi. This class may be used in structures or roadway pavement. The mix proportions including air entrainment and other additives shall meet the requirements of Highway Department of the State in which concrete is being placed.

26.3. Placing

26.3.1. The Subcontractor shall notify the Contractor at least twenty-four (24) hours in advance of placing concrete to permit proper inspection and approval of forms and reinforcement by the Contractor.

26.3.2. Concrete and reinforcing steel shall be placed at the locations and in accordance with the details shown on the Plans.

26.3.3. No concrete work shall be done when the air temperature is below forty (40) degrees F, or if freezing weather is predicted before final set of the concrete, unless special means of heating and/or protecting the work are used for a period of at least seventy-two hours after it is poured. Concrete shall not be placed on frozen sub-grade.

26.3.4. Where splices in reinforcing steel are necessary, the bars shall be lapped twenty-four (24) times their least diameter.

26.3.5. Concrete shall be of workable consistency with slump between two (2) and four and one-half (4 1/2) inches when placed. It shall be compacted by spading or by mechanical vibrator to prevent honeycomb. The concrete shall be spouted so that the total free drop will not exceed six (6) feet. No concrete shall be used which has partially set before final placing or which has segregated in transport. Re-tempering will not be permitted.

26.3.6. All concrete shall be placed monolithically so that fresh concrete shall not be placed against concrete that has taken initial set except where construction joints are required.

26.3.7. All surface concrete shall be cured for a period of seven (7) days with a water saturated covering or by other approved methods that will keep all surfaces continuously wet.

26.4. Measurement and Pavement

26.4.1. Concrete shall not be measured and paid as a separate item but shall be subsidiary to the cost of applicable item for which the concrete is placed.

26.4.2. The furnishing and installation of reinforcing steel shall not be measured separately but shall be considered subsidiary to concrete work.

SECTION 6 - Specifications For Aerial Placement Of Fiber Optic Cable

1. General

- 1.1 General. All IRHTP owned poles and/or cable will be identified with ID tags. All cables will meet all standards set up by NESC, agencies of cities, state, county, federal government, railroads or other entities which provide for the placement of IRHTP facilities within their respective rights of way.
- 1.2 Lengths. Use the longest lengths to facilitate construction costs, placement, and splicing. Entire reels can be placed without splice points to minimize transmission loss and reduce splicing costs.
- 1.3 As-builts. Will reflect span measurements, size, class & ownership (percent of ownership if applicable) of all poles joint use and IRHTP owned. All IRHTP owned/leased poles shall be identified with ID tags and size of messenger. If over-lashing is used: who owns messenger and/or other cables (type, size, gauge if applicable) involved in over-lashing. The clearance height at mid-span at the completion of construction, all sequence numbers at each pole will be recorded as well as: location of all MGN grounds, size and lead of guying and size and type of anchor.

2. Placement

2.1 Minimum Bending Radius

Nominal Cable Diameter	Minimum Bend Radius (No Tension) Installed	Minimum Bend Radius (Under Tension)
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143.1 Millimeters	143.2 Inches	143.3 Millimeters	143.4 Inches	143.5 Millimeters	143.6 Inches
6.0-10.0	¼ -3/8	10.0	4.0	15.0	4.0
10.1 - 15.0	4/10 - 6/10	15.0	6.0	22.5	9.0
15.1 - 20.0	10/16 - 8/10	20.0	8.0	25.0	10.0
20.1 - 23.0	13/16 - 9/10	23.0	9.0	25.0	10.0
23.1 - 25.0	15/16 - 1.0	25.0	10.0	30.0	12.0

- 2.2 Figure – Eighting Cable. If the cable must be unreeled during installation, use the “figure - eight” configuration to prevent kinking or twisting. Fiber optic cable should not be coiled in a continuous direction except for lengths of 30 meters (100 ft) or less. The preferred size of the “figure - eight” is about 4.5 m / 15 feet in length, with each loop about 1.5 m / 5 feet to 2.4 m / 8 feet in diameter. Do not cut the cable under any circumstances without consulting the IRHTP field engineer on the job.

2.3 Dip Pole. At a dip pole, form a minimum of a 100-foot expansion loop using “snowshoes”. Identify the cable with a caution tag. Protect the cable on the pole with “U guards,” 18” inches below the strand to just above ground level.

2.4 Planning and Preparation.

2.4.1 Poles. Determine the ability of existing pole lines and guys to support the new cable plant, as well as any restrictions imposed by the pole owner. The guying should remove all of the lateral stress on each pole so that the pole simply supports the weight of the cables, hardware and equipment attached to it. Stated another way the facility being constructed should be supported independent of all other facilities on the pole line. Obtain a written contract from the owner of poles with IRHTP as the owner of the facility being placed on the pole line. Contract will state all the fees associated with the attachment either on a one time or annual basis. The written contact with owner of poles will also state the pole/strand replacement policy/cost involved. Obtain all necessary permits from the governing bodies involved. Contact the Iowa One Call system when placing new poles and anchors.

2.4.2 Clearances and Separations. On a case-by-case basis determine the clearances between the proposed fiber optic cable and the existing facilities. Be certain that the proposed facility is constructed according to the National Electrical Safety Code (NESC) and the appropriate local safety codes. See Example 1.29. The fiber optic cable should occupy the uppermost available communication space on the pole due to its small weight and resultant sag.

ITEM	URBAN
	Feet at Maximum sag
Where cables guys, line, or drop wires run along and within the limits of : a) Public highways, streets, and roads b) Public alleys c) Ways accessible to pedestrians only	18’ 15.5’ 12’
Where cables, guys, line or drop wires cross over private property or ground a) Accessible to pedestrians only b) Accessible to people on horses or loaded farm vehicles	9.5’ 16’
Where cables, guys, line or drop wires cross over: a) Public highways, streets and roads b) Public alleys c) Driveways in general unless height of loaded vehicles or equipment using drive requires extra clearance.	18’ +15.5’

d) Farm driveway - accessible to combines e) Driveways---residential garages f) Ways accessible to pedestrians only. g) Obstacles (billboards, roofs) h) Flat roofs which may be used by tenants or workmen. i) Railroads --- cable on messenger j) Waterways (rivers, canals, etc.) provide clearance specified by proper authorities and on work plans. (Human with fishing pole) + Secure additional clearance on new construction when warranted at specific locations.	+15.5' 18' 15.5' 12' 2' 9.5' 27' 14'
MINIMUM CLEARANCE ABOVE GROUND FOR TELEPHONE FACILITIES	
<i>TYPE OF CROSSING WIRES & CABLE</i>	<i>TELEPHONE CABLES, MESSENGER, DROPS, AND GUYS</i>
	<div>CROSSING OVER</div> <div>CROSSING UNDER</div>
Open supply wires 0-750 volts & supply cables having effectively grounded sheath or messenger - all voltages. a) Line wires b) Service wires	4' 2' 4'
Open supply, line or service wires a) 750 - 8700 volts b) 8700 - 50,000 volts	6' 6'
Foreign guys, span wires, lightning protection wires	2' 2'
Foreign communication wires, cables, and fire alarm wires	2' 2'
Trolley contact conductors. a) 750 volts or less b) 750 - 8700 volts	 4' ----- 6'
* Clearance for (a) may be reduced to 4 feet if crossing is more than 6' from communication pole.	
Note: The above clearances apply where the crossing span length of the upper conductor or wire does not exceed 175	

feet. For greater span lengths, increase clearances in accordance with NESC.

3. Lashed Aerial Plant

3.1 General. Fiber optic cables must be installed without loose lashing, twisting, or weaving along the strand.

3.2 Suspension Strands

3.2.1 Suspension strands are susceptible to fatigue failure near pole-mounted suspension clamps if left under critical stringing tensions without supporting a load. Refer to the table below for the rated breaking strength and the type of steel used.

DIAMETER

146 RATINGS	147 EHS	148 UG
6M	1/4"	5/16"
10M	5/16"	3/8"
16M	3/8"	7/16"
20M	7/16"	1/2"

“M” indicates the approximate breaking strength in thousands of pounds. “UG” or EHS indicates the tensile strength of the steel used in the messenger.

3.2.2 Refer to the table below for the minimum tensions stringing tensions for a particular cable weight using different messenger grades. Messenger tensions listed are the minimum tensions required for each span to reduce cable strain.

Minimum & Critical Messenger Tensions in Pounds Prior to Aerial Installation of Fiber Optic Cable

Maximum 0.18 lb/ft, 0.80 Inches Diameter Cable, (Using EHS Messenger, Not UG)

149 Messenger	150 Span
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	Up to 200'	200 - 300'	300 -400'	Critical Tension
6M EHS 1/4"	1200 lbs	1600 lbs	----	2000 lbs
10M EHS 5/16"	1500 lbs	1800 lbs	2400 lbs	3000 lbs
16M EHS 3/8"	1800 lbs	2200 lbs	2600 lbs	6000 lbs

Maximum 0.16 lb/ft, 0.68 Inches Diameter Cable
(Using UG Messenger, Not EHS)

6M UG 5/16"	1600 lbs	---	---	---
10M UG 3/8"	1800 lbs	2200 lbs	2500 lbs	---

3.2.3 When specifying a strand for fiber optic cable, the two most important considerations are; (1) strength of strand and (2) excess cable stretch does not occur. When the diameter of a strand is enlarged to increase its strength, its weight and the effect of wind and ice loading is affected, which increases cable strain. Normally the “best” stand is not the question, but rather if the normal strand is satisfactory. Technically, the smallest EHS messenger with a satisfactory strength is “best”. When installing a dedicated suspension strand for fiber optic cable, standard hardware (eyebolts, clamps, etc) should be used.

3.3 Overlashing.

3.3.1 Considerations

- 3.3.1.1 Maximum span length (pole spacing)
- 3.3.1.2 Size of the existing messenger
- 3.3.1.3 Messenger- EHS or UG?
- 3.3.1.4 Weight & diameter of the existing copper (or fiber) cable(s)
- 3.3.1.5 Initial messenger tension (If not available, what is the present messenger tension? Measured at what temperature?)
- 3.3.1.6 Age of the existing copper (or fiber) cables
- 3.3.1.7 Loading conditions. In the Midwest IRHTP will consider only a heavy loading.
- 3.3.1.8 Size of the fiber cable being installed (cable, weight, O.D., etc).

3.4 Bonding and Grounding

- 3.4.1 If dielectric aerial cable is used, maintain the dielectric properties by using non-metallic lashing materials.
- 3.4.2 If using a metallic messenger or non-dielectric aerial cable on a joint use pole and/or a separate pole line form a continuous bond between all metallic items being placed and the MGN (multi-grounded neutral) used by the power company and/or any other

entity occupying the same pole line use. The purpose behind the aforementioned is to eliminate different electric potentials between independently owned facilities occupying the same pole line. No communication cable on a MGN system will have less than 4 grounds per mile. A non-dielectric aerial cable must occupy the communication space as defined by the National Electrical Safety Code. A dielectric fiber optic cable may occupy either the supply or the communication space on joint use construction. No communication cable shall occupy the space between what is defined as the communication and the supply space. Refer to NESC Section 224, par. 4 & 230F. Quote from NESC: Section 235C, E3; Note that a fully dielectric fiber optic cable carried on a nonmetallic messenger is considered as a supply neutral meeting Rule 230E1 (if located in the supply space) or an ordinary communication cable (if located in the communication space). Such cables must be located either in the supply space or the communication space, not in the safety zone between the two spaces.

- 3.5 Drip Loops Definition. A smooth-curve type loop form at each pole. The use of the 3” drip loop at each pole is required by the IRHTP for two reasons: 1) the extra slack provides for expansion and contraction by the messenger, 2) it provides extra slack if object falls on the messenger. Example: Prevents cable damage if a tree falls on the strand. Do not exceed the minimum bending radius of the cable. If contact is likely between the loop and the pole a cable guard will be required. Refer to Example for drip loop. Each drip loop will have the cable sequence numbers recorded and the IRHTP cable will be identified with an IRHTP ownership tag.
- 3.6 Lashing. Fiber optic cables must be installed without loose lashing, twisting, or weaving along the strand. Contractor will replace any cable showing a deformation. Example: Rippling, or kinking. REQUIREMENTS: Contractor will provide one wrap of lashing wire per linear foot when lashing IRHTP fiber optic cable to messenger. Cable will be double lashed in 3 different circumstances: 1) over-lashing over existing aerial cables, 2) right of way to right of way over railroads, 3) right of way to right of way over roadways. Cable will be lashed up on a span by span basis. All lashing wire should be terminated at each pole with a lashing wire clamp. Lashing wire will be terminated by placing a cable spacer between the fiber optic cable and strand. Locate the lashing wire clamp 2 inches from the strap and spacer. Pull out enough lashing wire for termination on to the lashing wire clamp. Wrap the lashing wire 3 times around only the strand between the lashing wire clamp and the planned location of the first wrap around both the strand and the fiber optic cable. Lashing wire should follow the spiral of the strand wires.
- 3.7 Splicing and Slack Storage. All cables will be butt spliced. All slack-cable loops will be placed a minimum of 4 feet from the pole using snowshoes. The minimum cable coil required at a splice location will be from the strand to ground level plus 20 feet on each side of the splice. In no case shall the splicing be done from a bucket. All splicing will be done on the ground in a protected environment (tent, van, or trailer). A minimum of a 100 foot cable coil (placed in snowshoes) will be required in the following circumstances: 1) railroad crossings, highway crossings, 3) Interstate crossings, 4) main thoroughfares in cities.

SECTION 7 - Splicing And Testing

- 1. General.** This document addresses the IRHTP requirements for splicing, testing, documenting and enclosing fiber optic cable for use as part of the IRHTP system.
- 2. Access To Work.**
 - 2.1 The Cable installer is required to provide their access to all splice locations.
 - 2.2 Access to splice points at all locations other than the freeways can be made from the shoulder of the road. In no case is access from freeways allowed from the shoulder of the road or ramps. No stopping or parking is allowed on the freeway.
 - 2.3 The Cable installer shall be responsible to repair any damages that it may cause to the right-of-way.
 - 2.4 The cable will be stored in hand holes at all splice locations. The Cable installer shall be responsible to access the cable at the splice locations and shall have equipment for removal of loose dirt and water or the removal of other obstructions to the performance of the Cable installer's work.
- 3. Material.** The Cable installer shall be required to supply all material, tools, test equipment, splicing equipment, consumable items, and incidentals necessary to access the cable at the splice locations, perform quality splicing, termination, and testing to include, but not necessarily be limited to the following:
 - 3.1 Enclosure, inner-closure, splice trays, heat shrink sleeves and encapsulate.
 - 3.1.1 The splice closure shall be the Raychem FOSC 450 Fiber Optic Gel Closure or equivalent.
 - 3.1.2 Wire tags with clear heat shrink tubing for #6 insulated ground wire such as Panduit #HSDL9-50-31 or approved equal.
 - 3.2 #6 green insulated ground wire, mechanical lugs and bolts, nuts and washers for grounding terminations and cable sheath bonds.
- 4. Pre-Placement Cable Testing.** In order to minimize the amount of rework in the right-of-way, which may be required and to check for fiber optic cable defects, the Cable installer shall be responsible for on reel verification of cable quality prior to placement.
 - 4.1 One hundred percent (100%) of the cable's fiber count shall be tested at 1310 and 1550nm with a Tektronix TFP2 or equivalent Optical Time Domain Reflectometer (OTDR), a stabilized light source and optical power meter, or, equivalent test equipment. Test results will be recorded on a form supplied by the IRHTP. Completed test forms on each reel shall be handed over to the IRHTP field engineer.
 - 4.2 Cable ends shall be sealed upon completion of testing.
- 5. Ultimate Responsibility.** The Cable installer shall be ultimately responsible for providing installed fiber cable in which each fiber meets the specifications set forth in this standard.
- 6. Splices.**
 - 6.1 All splices shall be placed in hand holes. There are to be no direct buried splices.

- 6.1.1 Cable and closure preparation shall conform to the manufacturer's standards and installation manuals.
- 6.1.2 Hand holes and pedestals shall be compatible with existing IRHTP components
- 6.2 All fibers are to be spliced according to the splice assignment sheets provided by the IRHTP.
- 6.3 All fibers are to be fusion spliced and placed in a Raychem FOSC 450 Fiber Optic Gel enclosure according to the manufactures technical installation instructions and a workmanlike manner.
- 6.4 All spliced fibers shall be protected by using the appropriate organizer tray and associated incidental items. If fiber optic heat shrink sleeves are used, a heat oven shall be used to shrink all sleeves. Care must be exercised to prevent damage to exposed fibers by overheating.
- 6.5 To insure acceptable splices prior to closing and encapsulating the splice case, the Cable installer shall monitor the splicing while it is being performed using an OTDR or a splicer with some type of optimizing capability, such as an LID unit or an optimizing alignment screen, or equivalent.
- 6.6 Splice Grounds (Refer to Example 1.26 - 1.27)
 - 6.6.1 A number six (#6) insulated ground wire shall be installed from the SIP (pedestal) through the existing conduit to the splice enclosure and terminated at both ends. SIP termination nuts shall have a 3/8 inch head.
 - 6.6.2 The ground wire at the SIP shall be identified with major direction associated with the running line of each of the links, e.g., WEST, on heat-shrink ID tags.
- 6.7 The IRHTP reserves the right to accept a splice at any time and waive the above requirements on a case by case basis as relates to splice loss. A waiver at any time shall not be construed to be a relinquishment of any requirements as spelled out in this specification.
- 6.8 Vendor must verify that all fibers are compatible end-to-end. That is fiber number 24 at location A is fiber number 24 at location Z.
- 7. **Loss Specifications.**
 - 7.1 The maximum acceptable loss for the cable shall be:
 - 7.1.1 0.35 dB/km @ 1310 nm
 - 7.1.2 0.25 dB/km @ 1550 nm
 - 7.2 The maximum acceptable loss per splice shall be:
 - 7.2.1 Maximum splice loss in one direction shall be 0.2 dB.
 - 7.2.2 Maximum bi-directional average splice loss shall be 0.2 dB.
 - 7.3 Maintenance splice loss allocation. Each link shall have sufficient reserve loss margin at acceptance to accept the loss associated with six (6) future maintenance splices and still meet the link unallocated gain margin.
- 8. **Splicing At Active Locations.**

- 8.1 The Cable installer shall be notified of fibers in the area that are active. It shall be the Cable installer's responsibility to coordinate and supervise all work so that there is no interruption of service on these active fibers during cable/closure prep, splicing, testing, and so on at end points.
- 8.2 The Cable installer shall notify the IRHTP or its authorized representative at least five (5) working days prior to the commencement of any work at splice points with active fibers.
- 8.3 The Cable installer shall have a responsible supervisor monitoring all work being done at all splice locations having active fibers present.
- 8.4 Unless IRHTP or another governing agency (such as the ICN) grants an exception, all splicing on fiber sheaths containing active fibers will be done between the hours of midnight (00:00) and 6:00 AM local.
- 8.5 The Cable installer shall have all the materials required to make a temporary and or a permanent repair in the event a fiber is damaged in the course of work. The materials shall be at the site of the work prior to any work beginning. The Cable installer shall notify the IRHTP immediately in the event an active fiber is damaged.
- 8.6 In the event that active fibers are damaged by the Cable installer, the Cable installer shall supply all resources necessary and directed by the IRHTP to reestablish service on the active fibers. All costs relating to the damage of the active fibers shall be the responsibility of the Cable installer.

9. Testing

- 9.1 All test equipment shall be calibrated within ninety (90) days prior to testing. A sticker with the date of calibration shall be fixed to the equipment. A calibration certificate shall be presented to the IRHTP or its authorized representative upon request.
- 9.2 Each span shall be tested bi-directionally from end point to end point. Each span trace shall be recorded so that each splice can be clearly expanded (long range, mid range or high resolution). Some spans will need all three traces. A span map shall be filled out recording each splice loss from each direction and the optical length between splices as well as any other information required by the span map.
- 9.3 The Cable installer shall be required to perform the following tests:
 - 9.3.1 Damaged Cable. In the event it is suspected that the cable has been damaged by the Cable installer at any time, the Cable installer will be required to test the cable with an OTDR. A hard copy of the OTDR test shall be submitted to the IRHTP representative. The Cable installer shall be prepared to test the damaged cable within 24 hours of notification by the IRHTP's representative.
 - 9.3.2 End to End Bi-directional OTDR Span & Splice Test. Each fiber of each span is to be tested bi-directionally at 1310 nm and or 1550 nm as directed by IRHTP from end point to end point and record of results submitted to IRHTP for acceptance.
 - 9.3.3 Cable Sheath. The cable sheath of each installed reel of cable shall be tested for continuity and the results recorded on the span map.

10. Acceptance Criteria. The acceptance criteria shall satisfy, as applicable, the requirements of this standard which includes:

10.1 Verifying, and documenting, that at least a 3 dB unallocated margin of gain exists, at 1310 nm, on each link.

10.2. All as-built drawings as specified in the Iowa Communications Network As-Built Drawing Conventions and Symbols Standard.

11. Markers. All splice hand holes shall be marked with an IRHTP Cable signs (furnished by IRHTP) at the top of the post and an IRHTP Splice sign mounted on the post just below the IRHTP Cable sign.

12. Documentation

12.1 Splice Identification

12.1.1 Link Splices. Splices interconnecting one or more links will be defined by IRHTP by the characters LS (link splice) and two or more identification characters, e.g., LS-13A.

12.1.2 Backbone Splices. Splices placed at the end of reels are referred to as backbone splices and numbered by the Cable installer in sequence for a given link, e.g., B1210-1, B1210-2, and so on.

12.1.3 Maintenance Splices. Splices that are required because of a maintenance or repair to the cable are referred to a maintenance splices and shall be identified as Maintenance Splice, MS"LINK #"- "x", with "x" identifying the time sequence that the splice was made, e.g., MS1210-1 is the first maintenance splice made on Link 1210. The Cable installer will assign MS identification codes to maintenance splices all unaccepted links. On accepted links, the Cable installer will identify the time sequence that the splice was made and request a splice identification code from the IRHTP.

12.2 Documentation Package

12.2.1 The following hard copy documentation package shall be submitted to the IRHTP on the applicable forms within five (5) working days after completion of the span splicing and testing, or a minimum, of thirty days prior to the commencement of acceptance testing. Each package shall be neatly organized, with dividers in a separate loose leaf, 3 ring binder or other IRHTP approved binder. All forms shall be completely filled out. All forms and OTDR shall be legible and reproducible. All sheets/forms shall have a revision log and be titled and dated.

12.2.1.1 A splice identification sheet.

12.2.1.2 A span map for each span.

12.2.1.3 The splice assignment sheets.

12.2.1.4 Reproducible copies of each span trace.

12.2.1.5 Reproducible copies of splice traces.

SECTION 8 - As-Built Drawing

1. Introduction

- 1.1 Delivery Method. Two sets of legible, reproducible as-built drawings on 11 X 17 inch, white paper, in a hard cover binder shall be provided for each link. If available, it would be desirable to also have a set on a 3.5 inch diskette in a format compatible with the IRHTP's computer aided design (CAD) system. The IRHTP's current CAD system is an AutoCAD, Release 2002 or newer.
- 1.2 Symbols and Conventions. The as-built drawings are to use symbols and conventions specified in this document. If not specifically stated, the symbols and conventions to be used are those considered required by good engineering drawing practices. The vendor is to provide to the IRHTP, any symbol, icon, model, block, and so on that is used on, or as part of, the as-built drawings provided for any part of the IRHTP. These symbols, icons, models, blocks, and so on, are to be provided as defined in section 1.1.0.
- 1.3 Consistency. A key requirement is for the symbols, conventions, practices, scale, and so on, to be consistent from one drawing to the next.
- 1.4 Governing/Authorization Agency Permits. Where there is a governing agency permit associated with one or more as-built drawings, there shall be correlation between the method of showing project from and to points on the permit and the as-built drawings. For example, where an Iowa Department of Transportation (IDOT) permit uses highway stationing (HWY STA.), the as-built drawings, which includes these particular permit points will, as a minimum, show HWY STA. numbers at the start and end of the particular drawing.
- 1.5 Link As-Built Drawings. The IRHTP consists of a series of spans, segments, and links. The specific start and end point of each span, segment, and link has been or will be defined by the IRHTP or its' authorized representative. Each link is identified by a unique set of characters. A set of as-built drawings is to be provided for each link.
 - 1.5.1 Each as-built drawing shall use the unique link identifier as part of the title, e.g., Link 1234, and will be included in the drawing number, e.g., DWG 1234-08 of 20.
 - 1.5.2 Drawing Revisions. As part of the title and status blocks, each drawing shall list the reason(s) that an individual drawing was changed.
 - 1.5.3 The first sheet of a set of link drawings shall be numbered DWG 0. It is a title page and shall contain:
 - 1.5.3.1 Link name/title.
 - 1.5.3.2 A revision table for each of the link drawings listing the current revision of each drawing.
 - 1.5.3.3 Cable specifications.
 - 1.5.3.4 To-from information, including start and end point identification such as mile post numbers, highway station numbers, and or other readily recognizable identifiers.

1.5.3.5 A table listing each splice associated with the link, and, the drawing number containing that splice.

1.5.3.6 A revision record for DWG 0.

1.6. Scale. While drawings scale is specified as "none", to achieve consistency, the typical landscape drawing has 14 to 15 inches of running line, covering about 0.5 miles. Where appropriate, a single 17 X 11 sheet may contain 2 drawings. No specific scale is required for the direction perpendicular to the running line except that it shall be consistent and, reasonable distance differences shall be obvious. Individual drawings may deviate from the above scale requirements for the sake of clarity.

1.7 Link Drawing Order/Sequence. Each set of link drawings shall read from left to right. That is, when the major direction of the link is east/west, the left side or edge of a drawing will show the match line for a more westerly/lower numbered drawing. When the major direction of the link is north/south, the left side or edge of a drawing will show the match line for a more southerly/lower numbered drawing.

1.8 Highway Plan Drawings. If available, highway plan drawings from IDOT may be used as part of an as-built drawing for additional information.

2. Specific Requirements

2.1 Highway Location Signs/Markers. When available, drawings shall show highway mile post numbers and highway stationing numbers.

2.2 Street, Road, Highway Identification

2.2.1 The highway marker number, e.g., county E-16, I-80, and so on, will be shown on all county, state, or federal highways that are on a drawing.

2.2.2 Most counties in Iowa have or are in the process of acquiring Extended 911 capability. Individual addresses are a requirement for this capability. Therefore, most, if not all, Iowa counties have assigned names to all county roads which are to be included on the drawings.

2.2.3 Multiple Identifiers: Where there is more than one identifying name and or number for a street, road or highway, all identifiers shall be shown on the drawing, e.g., V-24, OLD HOME ROAD, and so on.

2.3 County, Township, Range, Section(s). As a minimum, the first and last drawing of a set of link as-built drawings shall show the county, township name and identifier, range identifier and section number(s) peculiar to that particular drawing. When the county, township, or range changes in a link drawing sequence, the previous and the new county, township, range, or section shall be shown. The city, county, state boundary symbol shown on the LEGEND AND SYMBOL sheet is to be used. The preference is to have the county, township, range, and section specified on each drawing.

2.4 Fiber Cable Specifications. The fiber cable specification shall be shown on each page. See example drawings and the LEGEND and SYMBOL sheet.

2.5 Link Continuity. The first and last page of each set of link drawings shall show the connections/splices to the connecting link(s). The connecting links shall be shown with their respective link identification.

2.6 Revision Log. Each drawing shall include a revision table that is used once a drawing has been distributed and or released, whether it be a pre release, bid issue, as-built, and so on. The reason for the change shall be included in the table.

2.7 Splice Identification

2.7.1 Link Splices. Splices interconnecting one or more links will be defined by the IRHTP by the characters LS (link splice) and two or more identification characters, e.g., LS-A.

2.7.2 Backbone Splices. Splices placed at the end of reels are referred to as backbone splices and numbered in sequence for a given link, e.g., B1210-1, B1210-2, and so on.

2.7.3 Maintenance Splices. Splices that are required because of a maintenance or repair to the cable are referred to as maintenance splices and shall be identified as Maintenance Splice, MS"LINK #"- "x", with "x" identifying the time sequence that the splice was made, e.g., MS1210-1 is the first maintenance splice made on Link 1210. The cable installer will assign MS identification codes to all unaccepted links. On all links that have been accepted by the IRHTP, the cable installer will identify the time sequence that the splice was made and request a splice identification code from the IRHTP.

ANNEX H
CONTRACTUAL TERMS AND CONDITIONS
QUALITY ASSURANCE SAMPLE AGREEMENT
RFP 09-002

1. Term. This Agreement is effective [EFFECTIVE DATE WILL BE LISTED], and will continue through project completion (date).

2. Documents incorporated by reference.

2.1 Incorporation of Bid Proposal Documents. The IRHTP RFP 08-001 and the Vendor's bid proposal in response to this RFP, together with any clarifications, attachments, appendices, amendments or other writings of the IRHTP or the Vendor (collectively bid proposal) are incorporated into this Agreement by this reference as if fully set forth in this Agreement.

2.2 Contractual Obligations of Vendor. The terms and conditions of the bid proposal and of the RFP are made contractual obligations of the Vendor.

2.3 Contents of Agreement. The parties acknowledge that this Agreement consists of this document as well as the RFP and the bid proposal and that the parties are obligated to perform as set forth in the RFP and the bid proposal to the same extent that they are obligated to perform the specific duties set forth in this document.

2.3.1 Order of Preference. In the case of any inconsistency or conflict between the specific provisions of this document, the RFP or the bid proposal, any inconsistency or conflict shall be resolved as follows:

2.3.2 First, by giving preference to the specific provisions of this Agreement.

2.3.3 Second, by giving preference to the specific provisions of the RFP.

2.3.4 Third, by giving preference to the specific provisions of the bid proposal.

2.4 Intent of References to Bid Documents. The references to the parties' obligations, which are contained in this document, are intended to change, supplement or clarify the obligations as stated in the RFP and the bid proposal. The failure of the parties to make reference to the terms of the RFP or bid proposal in this document shall not be construed as creating a conflict and will not relieve the Vendor of the contractual obligations imposed by the terms of the RFP and the bid proposal. Terms offered in the bid proposal, which exceed the requirements of the RFP, shall not be construed as creating an inconsistency or conflict with the RFP or this document. The contractual obligations of the IRHTP cannot be implied from the bid proposal.

3. Definitions. The following words shall have the meanings set forth below. Words in the singular shall be held to include the plural and vice versa, and words of gender shall be held to include the other gender as the context requires. For the purposes of this Contract, the following terms and all other terms defined in this Contract shall have the meanings so defined unless the context clearly indicates otherwise.

“IHA” shall mean the Iowa Hospital Association

“IRHTP” shall mean the Iowa Rural Health Telecommunications Program

“Vendor” shall mean [Vendor will be listed].

4. Scope of Work.

4.1 Scope of Work. The fiber optic cable facility to be constructed pursuant to and as a result of this Agreement by the Vendor is described and attached hereto as Schedule A and made a part hereof by this reference.

4.2 Specifications The Vendor shall prepare and deliver specifications to the IRHTP which will detail the design, technical and functional capabilities, look and feel, and other attributes related to the project, all as more fully described in Schedule A.

4.3 Amendments to Scope of Services and Specifications. The parties agree that Schedule A, Scope of Services, and the specifications, may be revised, replaced, amended or deleted at any time during the term of this Agreement to reflect changes in service or performance standards upon the mutual written consent of the parties.

4.4 Industry Standards. Services rendered pursuant to this Agreement shall be performed in a professional and workmanlike manner in accordance with the terms of this Contract and with generally acceptable industry standards of performance for similar tasks and projects. In the absence of a detailed specification for the performance of any portion of this Agreement the parties agree that the applicable specification shall be the generally accepted industry standard. As long as the IRHTP notifies Vendor promptly of any services performed in violation of this standard, Vendor will re-perform the services, at no cost to IRHTP, such that the services are rendered in the above-specified manner.

4.5 Non-Exclusive Rights. This Agreement is not exclusive. The IRHTP reserves the right to select other Vendors to provide services similar or identical to the Scope of Services described in this Agreement during the term of this Agreement.

5. Compensation.

5.1 Payment Terms – Progress Payments

5.1.1 USAC and IRHTP will disburse funds based on monthly submissions (*i.e.*, invoices) of actual incurred eligible expenses, and will respond to vendor invoices in accordance with its current bi-monthly invoicing payment plan. This invoice process will permit disbursement of funds to ensure that the selected Participants' network projects proceed, while allowing USAC and the FCC to monitor expenditures in order to ensure compliance with the program and prevent waste, fraud, and abuse.

5.1.2 Upon award of contract for a link-segment, the Vendor will assist the IRHTP project coordinator in the development of a USAC Network Cost Worksheet. (NCW) This work sheet will list the primary tasks to be completed for each link-segment. When specific line items are completed on each NCW, the Vendor may submit it for a progress payment. As soon as the line item completion is approved by the IRHTP project coordinator the vendor will be paid 15% of the line item amount by the specific HCP served by the link-segment. The Vendor will acknowledge receipt of the 15% payment and forward appropriate forms to USAC for payment of the remaining 85%. USAC will honor requests for payment twice each month.

The invoices when submitted must certify by signature that all construction specifications were met during the covered period on the specified segment and show the contract number and project/site number on each invoice. If the IRHTP disputes the amount of any

invoice, the IRHTP will notify the Vendor of the dispute within 10 days of receipt of the invoice. IRHTP may withhold payment of the disputed amount until the dispute is resolved

5.2 Delay of Payment Due To Vendor's Failure. If the IRHTP in good faith determines that the Vendor has failed to perform or deliver any service or product as required by this Contract, the Vendor shall not be entitled to any compensation under this Contract until such service or product is completed or delivered. In the event of partial performance, the IRHTP may withhold that portion of the Vendor's compensation, which represents payment for the unsatisfactory services.

5.3 Audit The IRHTP shall audit the invoices presented to the IRHTP to ensure that they are proper, current and correct. The Vendor has 30 days from the date of invoice to present and resolve any discrepancies with the IRHTP. The IRHTP shall notify the Vendor of any and all discrepancies that the audit(s) reveals.

6. Insurance.

6.1 Coverage Requirements. The Vendor, and any subcontractors performing the services required under this Agreement, shall maintain in full force and effect, with insurance companies of recognized responsibility, at its own expense, insurance covering its work during the entire term of this Agreement and any extensions or renewals thereof. The insurance shall be of the type and in the amounts as reasonably required by the IRHTP. The Vendor's insurance shall, among other things, insure against any loss or damage resulting from or related to the Vendor's performance of this Agreement. All such insurance policies should remain in full force and effect for the entire life of this Agreement and shall not be canceled or changed except with the advance written approval of the IRHTP.

6.2 Types of Coverage. Unless otherwise requested by the IRHTP, Vendor shall, at its sole cost, cause to be issued and maintained during the entire term of this Agreement (and any extensions or renewals thereof) the insurance coverage's set forth below, each naming the State of Iowa and the IRHTP additional insured or loss payees, as applicable:

<i>Type</i>	<i>Amount</i>
Workers Compensation And Employer Liability	As Required By Iowa Law
General Liability (including contractual liability) written on an occurrence basis	TBD
General Aggregate	\$3 million
Product Liability	\$1 million
Personal Injury	\$1 million
Comprehensive Aggregate	\$1 million

Each Occurrence	\$1 million
Automobile Liability, including any auto, hired autos and non owned autos COMBINED SINGLE LIMIT	\$1 million

6.3 Coverage for HCP Property on ICN Controlled Premises. The policies shall provide coverage for damages to the HCP's property, or on premises under the control of the ICN and/or the State of Iowa.

- 6.5 Claims Made Coverage.** All insurance policies required by this Agreement must provide coverage for all claims arising from activities occurring during the term of the policy regardless of the date the claim is filed or expiration of the policy.
- 6.5 Notice Regarding Cancellation.** Certificates of insurance, which provide that the IRHTP will be notified at least thirty (30) days prior to cancellation of the coverage required by this Agreement must be provided by the Vendor and any subcontractors to the IRHTP at the time of execution of the Agreement or at a time mutually agreeable to the parties.
- 6.7 No Limitation of Liability.** The receipt of insured certificates by the IRHTP does not constitute approval of the coverage contained in the certificates, and the Vendor remains responsible for determining that its insurance coverage meets each and every requirement of this Agreement. Acceptance of the insurance certificates by the IRHTP shall not act to relieve the Vendor of any obligation under this Agreement. Only companies authorized to transact business in the State of Iowa shall issue the insurance policies and certificates required by this Section. It shall be the responsibility of the Vendor to keep the respective insurance policies and coverages current and in force during the life of this Agreement.
- 6.7 Warranty.** The Vendor warrants that it has examined its insurance coverage to determine that the State of Iowa and the IRHTP can be named as additional insured without creating an adverse effect on the Vendor's coverage.
- 6.7.1 Waiver of Subrogation Rights.** The Vendor shall obtain a waiver of any subrogation rights that any of its insurance carriers might have against State of Iowa and the IRHTP. The waiver of subrogation rights shall be indicated on the certificates of insurance coverage supplied to the IRHTP.

7. Confidential Information.

- 7.1.** During the course of this Agreement each party may disclose, to the other either directly or indirectly, certain data that is proprietary which shall be referred to as "Confidential Information" of the disclosing party and which must remain confidential. Confidential Information may include without limitation, among other things, such items as security information, user information, data, knowledge, trade secrets and other proprietary information, methodologies, developments, software, software documentation, inventions, processes, and other nonpublic information in oral, graphic, written, electronic or machine readable form.
- 7.2.** During the course of this Agreement each party may disclose, to the other either directly or indirectly, certain data that is proprietary which shall be referred to as "Confidential

Information" of the disclosing party and which must remain confidential. Confidential Information may include without limitation, among other things, such items as security information, user information, data, knowledge, trade secrets and other proprietary information, methodologies, developments, software, software documentation, inventions, processes, and other nonpublic information in oral, graphic, written, electronic or machine readable form.

7.2.1. All written or electronic Confidential Information shall be clearly marked as Confidential Information by the party providing the Confidential Information at the time of disclosure to the other party.

7.2.2. If the Confidential Information is disclosed orally, and reduced to writing, the receiving party must treat the information as Confidential Information.

7.2.3. The Vendor shall limit such identification to information it reasonably believes it is entitled to confidential treatment pursuant to FCC, USAC or other applicable law.

7.3. The obligations of this Agreement do not apply to Confidential Information which:

7.3.1. Was rightfully in the possession of the receiving party from a source other than the disclosing party prior to the time of disclosure of the Confidential Information to receiving party.

7.3.2. Was known to the receiving party prior to the disclosure of the Confidential Information from the disclosing party;

7.3.3. Was disclosed to the receiving party without restriction by an independent third party having a legal right to disclose the Confidential Information;

7.3.4. Becomes public knowledge, other than through an act or failure to act by the disclosing Party;

7.3.5. Is publicly available or in the public domain when provided;

7.3.6. Is independently developed by the disclosing party; or

7.3.7. Is disclosed pursuant to law, subpoena or the order of a court or government authority.

7.4. The parties shall have the following duties relating to the Confidential Information:

7.4.1. The Vendor shall designate one individual who shall remain the responsible authority in charge of all data collected, used or disseminated by the Vendor in connection with the performance of this Agreement. The Vendor shall accept responsibility for providing adequate supervision and training to its agents and employees to ensure compliance with the terms of this Agreement. The private and confidential data shall remain the property of the IRHTP at all times.

7.4.2. The Confidential Information of either party shall be held in strict confidence by the receiving party and shall not be disclosed or used by the receiving party without the prior written consent of the disclosing party, except as provided in this Agreement or as may be required by law pursuant to available confidentiality restrictions.

7.4.3. The parties shall use their best efforts to protect the Confidential Information in its possession.

- 7.4.4. The parties shall restrict disclosure of the Confidential Information solely to those of its employees, agents, consultants and attorneys with a need to know in order to accomplish the purpose of this Agreement.
- 7.4.5. The parties shall protect the Confidential Information from disclosure to or access by unauthorized persons.
- 7.4.6. The parties shall use the Confidential Information solely for the purpose of this Agreement and for no other purpose.
- 7.4.7. The parties shall not duplicate the Confidential Information in any form, except as may be necessary to accomplish the purpose of this Agreement.
- 7.4.8. The parties shall advise each of its employees, agents, consultants and attorneys who receive the Confidential Information of the obligations of confidentiality and restrictions on the use set forth herein.
- 7.4.9. The parties shall immediately return the Confidential Information and all copies thereof, to each other upon the earlier of the expiration of the need therefore or the termination of this Agreement in order to accomplish the purpose.

7.5. The provisions of this Agreement shall apply to all Confidential Information disclosed by the parties to each other over the course of this Agreement. The parties' obligations under this provision shall survive termination of this Agreement and shall be perpetual.

The Vendor shall indemnify the IRHTP for a violation of this Section. The Vendor shall notify the IRHTP prior to the destruction of these materials and shall provide the IRHTP with the opportunity for proper destruction of these materials.

No Confidential Information will be exported to any country in violation of the United States Export Administration Act and the regulations there under.

8. Vendor Warranties.

8.1 Construction of Warranties Expressed in this Agreement with Warranties Implied by Law. All warranties made by the Vendor in all provisions of this Agreement and the bid proposal by the Vendor, whether or not this Agreement specifically denominates the Vendor's promise as a warranty or whether the warranty is created only by the Vendor's affirmation or promise, or is created by a description of the materials and services to be provided, or by provision of samples to the IRHTP, shall not be construed as limiting or negating any warranty provided by law, including without limitation, warranties which arise through course of dealing or usage of trade. The warranties expressed in this Agreement are intended to modify the warranties implied by law only to the extent that they expand the warranties applicable to the goods and services provided by the Vendor.

8.2 The Vendor warrants that all the concepts, materials produced, the work product and the information, data, designs, processes, inventions, techniques, devices, and other such intellectual property furnished, used, or relied upon by the Vendor or the IRHTP will not infringe any copyright, patent, trademark, trade dress, or other intellectual property right of the Vendor or others. Any intellectual property provided to the IRHTP pursuant to the terms of this Agreement, shall be wholly original with the Vendor or the Vendor has secured all

applicable interests, rights, licenses, permits, or other intellectual property rights in such concepts, materials and work.

8.3 The Vendor represents and warrants that the concepts, materials and the IRHTP's use of same and the exercise by the IRHTP of the rights granted by this Agreement shall not infringe upon any other work, other than material provided by the IRHTP to the Vendor to be used as a basis for such materials, or violate the rights of publicity or privacy of, or constitute a libel or slander against, any person, firm or corporation and that the concepts, materials and works will not infringe upon the copyright, trademark, trade name, literary, dramatic, statutory, common law or any other rights of any person, firm or corporation or other entity.

8.4 The Vendor warrants that all of the services to be performed hereunder will be rendered using sound, professional practices and in a competent and professional manner by knowledgeable, trained and qualified personnel.

8.5 The Vendor warrants that the deliverables under this Agreement will operate in conformance with the terms and conditions of this Agreement.

8.6 The Vendor warrants that it has full authority to enter into this Agreement and that it has not granted and will not grant any right or interest to any person or entity that might derogate, encumber, or interfere with the rights granted to the IRHTP.

8.7 The Vendor warrants that all obligations owed to third parties with respect to the activities contemplated to be undertaken by the Vendor pursuant to this Agreement are or will be fully satisfied by the Vendor so that the IRHTP will not have any obligations with respect thereto.

8.8 The Vendor warrants that it is the owner of or otherwise has the right to use and distribute the software, the materials owned by the Vendor and any other materials, and methodologies used in connection with providing the services contemplated by this Agreement.

8.9 The Vendor expressly warrants to the standards in the industry all aspects of the goods and services provided by it or used by the Vendor and the IRHTP in performance of this Agreement.

8.10 The Vendor unconditionally warrants that all equipment supplied and installed for the purpose of fulfilling its obligations under this Agreement are fit for the purpose intended, that it complies with industry standards and that the equipment is compatible with the State's equipment.

9. Indemnification By Vendor. The Vendor agrees to defend, indemnify and hold the IRHTP, and the State of Iowa, its employees, agents, board members, appointed officials and elected officials, harmless from any and all demands, debts liabilities, damages, loss, claims, suits or actions, settlements, judgments, costs and expenses, including the reasonable value of time expended by the Attorney General's Office, and the costs and expenses and attorney fees of other counsel required to defend the IRHTP or the State of Iowa related to or arising from:

9.1 Any violation or breach of this Agreement including, without limitation, any of the Vendor's representations or warranties; or

9.2 Any acts or omissions, including, without limitation, negligent acts or omissions or willful misconduct of Vendor, its officers, employees, agents, board members, contractors, subcontractors, or counsel employed by Vendor in the performance of this Agreement, or any other reason in connection with the goods and services provided under this Agreement; or

9.3 Claims for any violation of any intellectual property right including but not limited to infringement of patents, trademarks, trade dress, trade secrets, or copyrights arising from the any of the goods or service performed in accordance with this Agreement; or

9.4 The Vendor's performance or attempted performance of this Agreement; or

9.5 Any failure by the Vendor to comply with all local, State and Federal laws and regulations; or

9.6 Any failure by the Vendor to make all reports, payments and withholdings required by Federal and State law with respect to social security, employee income and other taxes, fees or costs required by the Vendor to conduct business in the State of Iowa.

9.7 The Vendor's duty to indemnify as set forth in this Section shall survive the expiration or termination of this Agreement and shall apply to all acts taken in the performance of this Agreement regardless of the date any potential claim is made or discovered by the IRHTP.

10. Termination.

10.1 Termination For Lack Of Authority or Funding. Notwithstanding anything in this Agreement to the contrary and subject to the limitations, conditions and procedures set forth below, the IRHTP shall have the right to terminate this Agreement without penalty and without any advance notice as a result of any of the following:

10.1.1 The Legislature or Governor fails, in the sole opinion of the IRHTP, to appropriate funds sufficient to allow the IRHTP, the HCP's, or any state agency or department charged with responsibility to perform any of the IRHTP's obligations under this Agreement, to either meet its obligations under this Agreement or to operate as required to fulfill its obligations under this Agreement; or

10.1.2 If funds are de-appropriated, not allocated or if the funds needed by the IRHTP, in the IRHTP's sole discretion, are insufficient for any other reason; or

10.1.3 If the IRHTP's, or USAC's authorization to conduct its business is withdrawn or there is a material alteration in the programs or any other program the IRHTP administers; or

10.1.4 If the IRHTP's duties are substantially modified.

10.1.5 Written Notice of Cancellation. The IRHTP shall provide Vendor with written notice of cancellation pursuant to this Section.

10.2 Termination for Cause. The IRHTP may terminate this Agreement upon written notice for the substantial breach by Vendor of any material term if such breach is not cured by Vendor within the time period specified in the IRHTP's notice of breach or any subsequent notice or correspondence delivered by the IRHTP to Vendor. If a cure is feasible and an opportunity to cure is provided, the notice shall specify the exact date by which the condition must be cured. Following expiration of the opportunity to cure or notice from the IRHTP, the IRHTP may seek any legal or equitable remedy authorized by this Agreement or by law. Substantial breach events include but are not limited to the following:

10.2.1 Vendor fails to perform as required by this Agreement.

10.2.2 Vendor fails to make substantial and timely progress toward performance or fails to meet any of the material specifications and requirements stated in this Agreement,

including without limitation the warranties provided in this Agreement, in the RFP or in the Vendor's bid proposal.

10.3 Termination for Convenience. Following 30 days written notice, the IRHTP may terminate this Agreement in whole or in part for convenience without the payment of any penalty or incurring any further obligation to the Vendor. Termination for Convenience can be for any reason or no reason at all if it is in the best interests of the IRHTP.

10.4 Immediate Termination. The IRHTP may terminate this Agreement effective immediately without advance notice and without penalty for any of the following reasons:

10.4.1 Vendor furnished any statement, representation, warranty or certification in connection with this Agreement, which is materially false, deceptive, incorrect or incomplete.

10.4.2 Vendor fails to perform, to the IRHTP's satisfaction, any material requirement of this Agreement or is in violation of any material provision of this Agreement, including, without limitation, the express warranties made by the Vendor.

10.4.3 The IRHTP determines that satisfactory performance of this Agreement is substantially endangered or that a default is likely to occur.

10.4.4 Vendor becomes subject to any bankruptcy or insolvency proceeding under Federal or State law to the extent allowed by applicable Federal or State law including bankruptcy laws.

10.4.5 Vendor terminates or suspends its business.

10.4.6 The IRHTP reasonably believes that Vendor has become insolvent or unable to pay its obligations as they accrue consistent with applicable Federal or State law.

10.4.7 It is alleged that Vendor's processes or materials violate any valid patent, trademark, copyright, other intellectual property right or contract, and the IRHTP reasonably believes that the allegation may impair Vendor's performance of this Agreement.

10.4.8 Vendor has failed to comply with all applicable Federal, State, and local laws, rules, ordinances, regulations and orders when performing within the scope of this Agreement.

10.4.9 Vendor has engaged in conduct that has or may expose the IRHTP to liability, as determined in the IRHTP's sole discretion.

10.4.10 Vendor has a conflict of interest that interferes with fair competition or conflicts with an interest of the IRHTP as determined in the IRHTP's sole discretion.

10.5 Liability for payment at termination In the event of termination of this Agreement for any reason by USAC or the IRHTP, USAC and the IRHTP shall pay only the amounts, if any, due and owing to Vendor for services actually rendered up to and including the date of termination of the Agreement and for which the USAC and the IRHTP is obligated to pay pursuant to this Agreement. Payment will be made only upon submission of invoices and proper proof of Vendor's claim. This provision in no way limits the remedies available to USAC or the IRHTP in the event of a termination under this provision. However, the USAC or the IRHTP shall not be liable for any of the following costs:

10.5.1 The payment of Unemployment Compensation to Vendor's employees;

10.5.2 The payment of Workers' Compensation claims which occur during the Agreement or extend beyond the date on which the Agreement terminates.

10.5.3 Any costs incurred by Vendor in its performance of the Agreement including but not limited to startup costs, overhead or other costs associated with the performance of the Agreement.

10.5.4 Any taxes that may be owed by Vendor for the performance of this Agreement including but not limited to sales taxes, excise taxes, use taxes, income taxes or property.

10.6 Vendor Obligations upon Termination. Upon expiration or termination of this Agreement, or upon request of the IRHTP, the Vendor shall:

10.6.1 Immediately cease using and return to the IRHTP any personal property or material, whether tangible or intangible, provided by the IRHTP to the Vendor and in its, or any subcontractor's, control or possession;

10.6.2 Upon request from the IRHTP, destroy any personal property or material, whether tangible or intangible at no additional cost to the IRHTP, and verify in writing that the designated property or material has been destroyed;

10.6.3 Comply with the IRHTP's instructions for the timely transfer of active files and work being performed by Vendor under this Agreement to the IRHTP or the IRHTP's designee;

10.6.4 Protect and preserve property in the possession of the Vendor in which the IRHTP has an interest;

10.6.5 Stop work under this Agreement on the date specified in any notice of termination provided by the IRHTP;

10.6.6 Cooperate in good faith with the IRHTP, its employees, agents and contractors during the transition period between the notification of termination and the substitution of any replacement Vendor.

10.7 Care of Property. The Vendor shall be responsible for the proper custody and care of any of the HCP or State owned tangible personal property furnished for the Vendor's use in connection with the performance of the Agreement, and the Vendor will reimburse the IRHTP or the State for such property's loss or damage caused by the Vendor, normal wear and tear excepted.

10.8 Reduction of Resources. If, during the Term, the IRHTP experiences a change in the scope, nature or volume of its business, or if the IRHTP elects to change the manner or method by which it does business (including, but not limited to, an election by Iowa Legislature to effect a sale or other disposition of material assets), which have or may have the effect of causing a decrease in the quantity or quality of the Services that will be needed by IRHTP, then IRHTP may request Vendor to reduce the level of Services and the annual Service charges to IRHTP under this Agreement. However any such reduction must not adversely impact upon Vendor's ability to reasonably perform its obligations under the Agreement.

11. Contract Administration.

11.1 Independent Contractor. The status of the Vendor shall be that of an independent contractor. The Vendor, its employees, agents and any subcontractors performing under this

Agreement are not employees or agents of IHA. Neither the Vendor nor its employees shall be considered employees of IHA or IRHTP for Federal or State tax purposes. IHA and IRHTP will not withhold taxes on behalf of the Vendor (unless required by law).

11.2 Compliance with the Law and Regulations.

11.2.1 Compliance with the Law and Regulations. Vendor shall comply with all applicable Federal, State, and local laws, rules, ordinances, regulations and orders when performing within the scope of this Agreement, including, without limitation, all laws applicable to the prevention of discrimination in employment, the administrative rules of the Iowa Department of Management or the Iowa Civil Rights Commission which pertain to equal employment opportunity and affirmative action, laws relating to prevailing wages, occupational safety and health standards, prevention of discrimination in employment, payment of taxes, gift laws, lobbying laws and laws relating the use of targeted small businesses as subcontractors or suppliers.

11.2.2 The Vendor declares that it has complied with all Federal, State and local laws regarding business permits and licenses that may be required to carry out the work to be performed under this Agreement, including, without limitation, laws governing State of Iowa procurement and contracting.

11.2.3 The Vendor shall give notice to any labor union with which it has a bargaining or other agreement of its commitment under this section of the Agreement. The Vendor shall make the provisions of this Section a part of its contracts with any subcontractors providing goods or services related to the fulfillment of this Agreement.

11.2.4 The Vendor shall comply with all of the reporting and compliance standards regarding equal employment.

11.2.5 The Vendor may be required to submit its affirmative action plan

11.2.6 The IRHTP may consider the failure of the Vendor to comply with any law or regulation as a material breach of this Agreement. In addition, the Vendor may be declared ineligible for future USAC contracts or be subjected to other sanctions for failure to comply with this Section.

11.3 Amendments. This Agreement may be amended in writing from time to time by mutual consent of the parties. All amendments to this Agreement must be fully executed by the parties.

11.4 Third Party Beneficiaries. There are no third party beneficiaries to this Agreement. This Agreement is intended only to benefit IRHTP and the Vendor.

11.5 Choice of Law and Forum.

11.5.1 The laws of the State of Iowa shall govern and determine all matters arising out of or in connection with this Agreement without regard to the choice of law provisions of Iowa law.

11.5.2 In the event any proceeding of a quasi-judicial or judicial nature is commenced in connection with this Agreement, the exclusive jurisdiction for the proceeding shall be brought in Polk County District Court for the State of Iowa, Des Moines, Iowa, or in the United States District Court for the Southern District of Iowa, Central Division, Des Moines, Iowa wherever jurisdiction is appropriate.

11.5.3 This provision shall not be construed as waiving any immunity to suit or liability including, without limitation, sovereign immunity in State or Federal court, which may be available to the IRHTP or the State of Iowa.

11.6 **Integration.** This Agreement, including all the documents incorporated by reference, represents the entire Agreement between the parties and neither party is relying on any representation that may have been made which is not included in this Agreement. The parties agree that if a Schedule, Addendum, Rider or Exhibit or other document is attached hereto by the parties, and referred to herein, then the same shall be deemed incorporated herein by reference.

11.7 **Not a Joint Venture.** Nothing in this Agreement shall be construed as creating or constituting the relationship of a partnership, joint venture, (or other association of any kind or agent/principal relationship) between the parties hereto. No party, unless otherwise specifically provided for herein, has the authority to enter into any agreement or create an obligation or liability on behalf of, in the name of, or binding upon another party to this Agreement.

11.8 **Consent to Service.** The Vendor irrevocably consents to service of process by certified or registered mail addressed to the Vendor's designated agent. The Vendor appoints _____ at _____ as its agent to receive service of process. If for any reason the Vendor's agent for service is unable to act as such or the address of the agent changes, the Vendor shall immediately appoint a new agent and provide the IRHTP with written notice of the change in agent or address. Any change in the appointment of the agent or address will be effective only upon actual receipt by the IRHTP. Nothing in this provision will alter the right of the IRHTP to serve process in another manner permitted by law.

11.9 **Supersedes Former Agreements.** This Agreement supersedes all prior Agreements between the IRHTP and the Vendor for the services provided in connection with this Agreement.

11.10 **Waiver.** Any breach or default by either party shall not be waived or released other than in writing or by a written notice signed by the other party. Failure by either party at any time to require performance by the other party or to claim a breach of any provision of the Agreement shall not be construed as affecting any subsequent breach or the right to require performance with respect thereto or to claim a breach with respect thereto.

11.11 **Notices.**

11.11.1 Any and all notices, designations, consents, offers, acceptances or any other communication provided for herein shall be given in writing by registered or certified mail, return receipt requested, by receipted hand delivery, by Federal Express, courier or other similar and reliable carrier which shall be addressed to each party as set forth as follows:

If to the IRHTP: *Mr. Art Spies*

Iowa Hospital Association

100 East Grand Ave – Suite 100

Des Moines, Iowa 50309

If to the Vendor: [Vendor may provide one (1) contact]

11.11.2 Each such notice shall be deemed to have been provided:

11.11.2.1 At the time it is actually received; or,

11.11.2.2 Within one day in the case of overnight hand delivery, courier or services such as Federal Express with guaranteed next day of delivery; or,

11.11.2.3 Within five days after deposited the U.S. Mail in the case of registered U.S. Mail.

11.11.3 Copies of such notice to each party shall be provided separately.

11.11.4 From time to time, the parties may change the name and address of a party designated to receive notice. Such change of the designated person shall be in writing to the other party and as provided herein.

11.12 Cumulative Rights. The various rights, powers, options, elections and remedies of either party, provided in this Agreement, shall be construed as cumulative and no one of them is exclusive of the others or exclusive of any rights, remedies or priorities allowed either party by law. Nothing in this Agreement shall be construed as affecting, impairing or limiting the equitable or legal remedies to which either party may be entitled as a result of any breach of this Agreement.

11.13 Severability. If any provision of this Agreement is determined by a court of competent jurisdiction to be invalid or unenforceable, the invalid portion shall be severed from this Agreement. Such a determination shall not affect the validity or enforceability of any other part or provision of this Agreement.

11.14 Express Warranties. The Vendor expressly warrants all aspects of the items and services provided by it or used by the Vendor and the IRHTP in performance of this Agreement.

11.15 Warranty Regarding Solicitation. The Vendor warrants that no person or selling agency has been employed or retained to solicit and secure this Agreement upon an agreement or understanding for commission, percentage, brokerage or contingency except bona fide employees or selling agents maintained for the purpose of securing business.

11.16 Obligations of Joint Entities. If the Vendor is a joint entity consisting of more than one individual, partnership, corporation or other business organization, all such entities shall be jointly and severally liable for carrying out the Agreement activities.

11.17 Obligations Beyond Agreement Term. This Agreement shall remain in full force and effect to the end of the specified term or until terminated or canceled pursuant to this Agreement. All obligations of the Vendor incurred or existing under this Agreement as of the date of expiration, termination or cancellation will survive the expiration, termination or cancellation of this Agreement.

11.18 Time is of the Essence. Time is of the essence with respect to the successful performance of the terms of this Agreement. The Vendor shall ensure that all personnel providing services to the IRHTP are responsive to the IRHTP's requirements in all respects.

11.19 Authorization. Each party to this Agreement represents and warrants to the other that it has the right, power and authority to enter into and perform its obligations under this Agreement and that it has taken all requisite action (corporate, statutory, or otherwise) to approve execution, delivery and performance of this Agreement. This Agreement constitutes a legal, valid and binding obligation upon the parties in accordance with its terms.

11.20 Successors in Interest. All the terms, provisions, and conditions of the Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors, assigns, and legal representatives.

11.21 Counterparts and Facsimile Signatures. The parties agree that this Agreement has been or may be executed in several counterparts, each of which shall be deemed an original and all such counterparts shall together constitute one and the same instrument. The parties further agree that the signatures on this Agreement or any amendment or schedule may be manual, scanned, or a facsimile signature of the person authorized to sign the appropriate document. All authorized scanned or facsimile signatures shall have the same force and effect as if manually signed.

11.22 Additional Provisions. The parties agree that if a Schedule, Addendum, Rider or Exhibit is attached hereto by the parties, and referred to herein, then the same shall be deemed incorporated herein by reference.

11.23 Use of Third Parties/Prime Vendor Responsibilities. The IRHTP acknowledges that the Vendor may contract with third parties for the performance of any of the Vendor's obligations under this Agreement. All subcontracts shall be subject to advance written approval by the IRHTP. The Vendor may enter into these contracts to complete the project provided that the Vendor remains responsible for all services performed under this Agreement. All restrictions, obligations and responsibilities of the Vendor under this Agreement shall also apply to subcontractors. The IRHTP shall consider the Vendor to be the sole point of contact with regard to all matters related to this Agreement and is not required to initiate or maintain contact with any subcontractor. IRHTP may choose to deny use of any specific third party contractor at IRHTP's sole discretion, in which case the Vendor must obtain a different third party contractor.

11.24 Data Processing Warranty.

11.24.1 The Vendor warrants that each item of hardware, software, firmware, or a custom designed and developed software program or a system which is developed or delivered under, or used by Vendor in connection with its performance of this Agreement, shall accurately process data, including, but not limited to, calculating, comparing and sequencing, from, into, between and among the nineteenth, twentieth and twenty-first centuries, including leap year calculations, when used in accordance with the item(s) documentation provided by the Vendor.

11.24.2 If the items to be developed and delivered under this Agreement are to perform as a system with other hardware and/or software, then the warranty shall apply to the items developed and delivered as the items process, transfer, sequence data, or otherwise interact with other components or parts of the system. This warranty shall survive the term of this

Agreement. The remedies available to the IRHTP for a breach of warranty includes, but is not limited to, repair or replacement of non-compliant items or systems.

11.24.3 Nothing in this warranty shall be construed to limit any rights or remedies of the IRHTP under this Agreement with respect to defects in the items other than the Data Processing Warranty.

11.25 Force Majeure. Neither Vendor nor the IRHTP shall be liable to the other for any delay or failure of performance of this Agreement; and no delay or failure of performance shall constitute a default or give rise to any liability for damages if, and only to the extent that, such delay or failure is caused by a "force majeure".

11.25.1 As used in this Agreement, "force majeure" includes acts of God, war, civil disturbance and any other causes which are beyond the control and anticipation of the party effected and which, by the exercise of reasonable diligence, the party was unable to anticipate or prevent. Failure to perform by a subcontractor or an agent of the Vendor shall not be considered a "force majeure" unless the subcontractor or supplier is prevented from timely performance by a "force majeure" as defined in this Agreement. "Force majeure" does not include: financial difficulties of the Vendor or any parent, subsidiary, affiliated or associated company of Vendor; claims or court orders which restrict Vendor's ability to deliver the goods or services contemplated by this Agreement.

11.25.2 If a "force majeure" delays or prevents Vendor's performance, the Vendor shall immediately commence to use its best efforts to directly provide alternate, and to the extent possible, comparable performance. Comparability of performance and the possibility of comparable performance shall be reasonably determined solely by the IRHTP.

11.25.3 During any such period, the Vendor shall continue to be responsible for all costs and expenses related to alternative performance.

11.25.4 This Section shall not be construed as relieving the Vendor of its responsibility for any obligation which is being performed by a subcontractor or supplier of services unless the subcontractor or supplier is prevented from timely performance by a "force majeure" as described here.

11.26 Records Retention and Access. The Vendor shall permit the Auditor of the State of Iowa or any authorized representative of the State or any authorized representative of the United States government, or USAC, to access and examine, audit, excerpt and transcribe any directly pertinent validation records, financial records, accounting records, books, documents, papers, electronic or optically stored and created records or other records of the Vendor relating to or created as a result of the performance of this Agreement. These records shall be made available to the State, its designees, the Auditor, or an authorized representative of the United States government, or USAC, at reasonable times and at no cost to the requesting organization during the term of this Agreement and for a period of at least (5) years following the termination, cancellation or expiration of this Agreement.

11.27 Taxes. IRHTP declares and Vendor acknowledges that the Vendor and its subcontractors may be subject to certain taxes including but not limited to sales tax, motor vehicle fuel tax, personal or corporate income tax or other taxes or assessments, and to licensing fees or other miscellaneous fees or charges which may be imposed by Federal, State or local law or ordinance. The Vendor and its subcontractors shall be solely responsible for the payment of such taxes. The Vendor shall promptly pay all such taxes, fees or charges when due. IRHTP is

a tax-exempt entity and the Vendor shall not attempt to pass on any costs, including surcharges and fees, to the IRHTP that are attributable to federal, state, or local taxes, including sales tax, motor fuel tax, property tax, or personal or corporate income tax.

11.28 Further Assurances and Corrective Instruments. The Vendor agrees that it will, from time to time, execute, acknowledge and deliver, or cause to be executed, acknowledged and delivered, such supplements hereto and such further instruments as may reasonably be required for carrying out the expressed intention of this Agreement.

11.29 Assignment and Delegation. This Agreement may not be assigned, transferred or conveyed in whole or in part without the prior written consent of the other party. For purposes of construing this clause, a transfer of a controlling interest in Vendor shall be considered an assignment. If the State, in its sole discretion, determines that the Vendor's assignment of this Agreement to another person or entity is not in the State's best interests, the State may elect to terminate this Agreement with the Vendor without penalty upon thirty (30) days written notice to the Vendor.

11.30 Headings or Captions. The paragraph headings or captions are for identification purposes only and do not limit or construe the contents of the paragraphs.

SECTION 12. BUSINESS DOWNTURN.

12.1 Alternative Agreement In the event of a business downturn or budget difficulties beyond the control of the IRHTP, including budget difficulties of other HCP's or the IRHTP or significant restructuring or reorganization, any of which significantly reduces the volume of OSP plant required by the IRHTP, with the result that IRHTP will be unable to meet its revenue or volume commitments under this Agreement, Vendor and the IRHTP will cooperate in efforts to develop a mutually agreeable alternative.

SECTION 13. REDUCTION OF RESOURCES.

13.1 If, during the Term, the IRHTP or the HCP's experience a change in the scope, nature or volume of its business, or if the IRHTP elects to change the manner or method by which it does business, the Vendor will be asked to reduce the level of Services to IRHTP under this Agreement. However any such reduction must not adversely impact upon Vendor's ability to reasonably perform its obligations under the Agreement.

13.2 In such event, Vendor shall estimate, in writing and in good faith, the aggregate decreased charges to Vendor from IRHTP's ceasing to perform such Services and shall provide such written estimate to IRHTP, no later than 30 days from Vendor's receipt of IRHTP's notice. IRHTP, upon receipt of such estimate, may then elect by written notice given to Vendor within 15 days following receipt of Vendor's written estimate to:

13.3 Withdraw its request for a cessation of part of the Services;

13.4 Implement such partial cessation of Services based upon the estimate of Vendor; or

13.5 Request that Vendor negotiate with IRHTP regarding the aggregate reduction in the Contract Services due to Vendor from IRHTP hereunder as a result of the partial cessation of Services. If IRHTP shall elect to request Vendor to negotiate, the parties shall promptly negotiate in good faith regarding the amount.

SECTION 14. EXECUTION.

IN WITNESS WHEREOF, in consideration of the mutual covenants set forth above and for other good and valuable consideration, the receipt, adequacy and legal sufficiency of which are hereby acknowledged, the parties have entered into the above Agreement and have caused their duly authorized representatives to execute this Agreement.

IOWA RURAL HEALTH TELECOMMUNICATIONS PROGRAM

By: _____

Date: _____

Name: Mr. Art Spies

Title: Project Coordinator - IRHTP

(Vendor Name to be placed HERE)

By: _____

Date: _____

Name:

Title:

ANNEX I
LINK-SEGMENT COMPLETION CHECKLIST
RFP 09-002

A LOCATION – (HCP end)

Cable was installed in a workmanship like manner.
Any exposed cable or jumpers are in accordance with applicable codes
Fiber Optic Cable is properly tagged and identified
Conduit was installed in accordance with HCP instructions
FDP or Bulkheads mounted properly and securely
All FDP or Bulkhead connectors were covered with dust covers
Grounding was accomplished in a workmanship like manner
All building penetrations were properly sealed.
All firewall or building partition penetrations were properly sealed
Restoration Phase I (Initial) was performed to the best of the contractor's ability.
All construction debris and dirt was removed to the satisfaction of the HCP
Locate wire pedestal location is readily identifiable and connected

ROUTE

Cable was installed in accordance with IRHTP specifications
All hand holes and tubs have been readjusted for settling
All open ends of duct installed along the route have been sealed with appropriate duct plug material
Any pavement cracked during the cable installation process has been repaired.
Were pictures that were taken of pre-existing pavement conditions compared to final route reconnaissance and reviewed by HCP, Property owners, and the appropriate governmental entity?
Restoration Phase I (Initial) was performed to the best of the contractor's ability.

CABLE TESTING

Test equipment was calibrated within ninety (90) days prior to testing. A sticker with the date of calibration was affixed to the equipment. A calibration certificate was presented to the IRHTP or its authorized representative upon request.

Each span was tested bi-directionally from end point to end point. Each span trace was recorded so that each splice can be clearly expanded (long range, mid range or high resolution). (Some spans will need all three traces.) A span map was filled out recording each splice loss from each direction and the optical length between splices as well as any other information required by the span map.

Each fiber of each span was tested bi-directionally at 1310 nm and or 1550 nm as directed by IRHTP from end point to end point and record of results submitted to IRHTP for acceptance.

Locate wires, cable sheathes, and/or locate wire terminals have been tested for continuity end-to-end
Boring Traces, As-built or red-line construction drawings have been handed off to IRHTP Representative

Z LOCATION – (Network endpoint or meet point)

Cable was installed in a workmanship like manner.
Any exposed cable or jumpers are in accordance with applicable codes
Fiber Optic Cable is properly tagged and identified
Conduit was installed in accordance with ICN instructions
Bulkheads mounted properly and securely
All unconnected bulkheads are covered with dust covers
Grounding was accomplished in a workmanship like manner
Tubs and hand holes have been properly closed
All duct and conduit seals have been replaced
Locate wire terminations are readily identifiable

SID _____ **HCP Name:** _____ **By:** _____

IRHTP Representative: _____ **Date:** _____

Annex J
Service Provider Identification Number
RFP 09-002

In order to participate in the USAC Rural Health Care project you must secure a USAC Service Provider Identification Number (SPIN) for your company

Information on how to obtain a Service Provider Identification Number (SPIN)

To obtain a new Service Provider Identification Number (SPIN), a service provider must complete the Service Provider Identification and Contact Information (Form 498) and submit it to USAC for review and approval. USAC strongly encourages online filing of this form in order to more quickly process requests.

After online filing, a new service provider will be required to subsequently submit a hard copy of the form to USAC along with a certification letter signed by a company officer. To begin the online filing process, please visit [USAC's e-file page](#).

To download a blank form or view the form instructions, please visit [USAC's forms page](#).

Where to File

Service providers must submit the Form 498 and a signed letter of certification on company letterhead (See Attachments A, B, and C of FCC Form 498) before support payments will be authorized. Please send the form and certification letter to:

Universal Service Administrative Company
Billing and Disbursement
Attn: FCC Form 498
2000 L Street, N.W., Suite 200
Washington, DC 20036

Where to Get More Information

For any questions about completing this form, contact USAC:

E-mail: Form498@bcd.universalservice.org

Telephone: 888-641-8722

FAX: 888-637-6226

ANNEX K
USAC RURAL HEALTH CARE PILOT PROGRAM PROCESS
RFP 09-002

Competitive Bidding Requirement Overview

The RHCPP Selection Order requires the selected participants to conduct a competitive bidding process to select the most cost-effective vendor for design, evaluation, and deployment of the broadband network. To satisfy the competitive bidding requirement, among other things, selected participants must submit an FCC Form 465 that includes a description of services for which the health care provider(s) is seeking support and wait at least 28 days from the date on which this information is posted on USAC's website before making commitments with the selected service provider.

Please also see the [Wireline Competition Bureau's Letter to Program Participants on December 20, 2007](#).

Please feel free to address any concerns to RHCPilot@usac.org or call 800-229-5476.

Vendor Eligibility

All vendors that provide services or equipment eligible for funding under the Pilot Program may submit bids for Pilot Program projects. To receive RHCPP support, vendors also need to obtain a Service Provider Identification Number (SPIN) from USAC.

All telecommunications providers, Internet service providers, and other vendors may receive up to 85% of eligible Pilot Program costs. Network design firms and various types of construction companies may also participate. Project participants may choose to self-provision for these services and/or equipment in that they may do their own design work and/or network deployment, subject to the FCC's competitive bidding requirements. This program will refer to all of these entities collectively as Vendors.

Eligible Pilot Program costs include, but are not limited to:

- the non-recurring costs for design, engineering, materials, and construction of fiber facilities and other broadband infrastructure;
- the non-recurring costs of engineering, furnishing (i.e., as delivered from the manufacturer), and installing network equipment;
- the recurring and non-recurring costs of operating and maintaining the constructed network once the network is operational; and
- carrier-provided transmission services and the costs for subscribing to such facilities and services.

All vendors that supply these services or equipment may submit bids for Pilot Program projects. Vendors interested in submitting bids should familiarize themselves with the [2007 Rural Health Care Pilot Program Selection Order](#), which details the RHCPP network components eligible and ineligible for support. Additional information concerning the Pilot Program is available on the [FCC's Rural Health Care Pilot Program page](#).

All vendors (including self-provisioning project entities) must have a Service Provider Identification Number (SPIN), issued by USAC, to receive support for providing discounted service and equipment to eligible RHCPP project participants. If a vendor already has a SPIN, this number is good for all USF programs including the RHCPP. Vendors must ensure they have completed Box 8 of FCC Form 498. Vendors may edit this form if they have already obtained a

SPIN. For questions concerning eligibility, please call the Rural Health Care Call Center at 1-800-229-5476. For questions about obtaining a SPIN, please contact [Client Services Bureau](#) at 1-888-641-8722. Vendors that need to apply for a SPIN can go to USAC's [E-File](#) page.

Prior to receiving any RHCPP support, all vendors must complete certification stating they will comply with RHCPP rule and use funding only for the purpose intended. A sample template of the certification is available for download. The certification could be submitted to the Project Coordinator.

Searching for service request or Request for Proposal Online

To search for and view Pilot Program service requests (e.g., RFP) postings, vendors will go directly to the RHCPP website [search postings](#) page.

Rural Health Care Pilot Program Project Details

Vendors may view the posted service requests (e.g., RFP) and associated documents on the [Search Postings](#) page of the RHCPP website. Posted information includes:

- Services requested in PDF Format (e.g., RFP)
- Participating entities/HCPs
- Project Coordinator's name, location, and contact information
- Date Posted to USAC website
- Allowable Contract Date

Provide bid or requested service

After USAC posts a RHCPP Project's *Description of Services Requested & Certification Form* (Form 465) and associated supporting information, all vendors may view the information and provide bids.

The open competitive bidding process is a minimum of 28 days from the date USAC posts a Form 465 on USAC's website. During this minimum 28-day window, vendors may contact the Project Coordinator (or alternate point of contact (POC), if specified) to submit a bid for their service needs. RHCPP Participants must evaluate all bids and select the most cost-effective service or facility provider available. In selecting the most cost-effective bid, in addition to price, the FCC's [2007 Rural Health Care Pilot Program Selection Order](#) requires Participants to consider non-cost evaluation factors that include prior experience, including past performance; personnel qualifications, including technical excellence; management capability, including solicitation compliance; and environmental objectives (if appropriate). Additional discussion of the cost effective standard can be found in paragraphs 78 to 79 of the [2007 Rural Health Care Pilot Program Selection Order](#). Project Coordinators may conduct bidding rounds that exceed 28 days and may have multiple rounds of selection.

Vendors can search for requests for services on the RHCPP [Search Postings](#) page.

NOTE: Vendor or service provider participating in the competitive bid process is prohibited from interacting with or influencing the selected participant service request e.g. FCC Form and related materials.

Signing contract or service

Vendors may enter into a contract with Participants after the minimum 28-day posting requirement has been met.

It is the Participant's responsibility to determine the most cost-effective service and select an eligible vendor before signing a contract. Participating in the contract before completion of the 28-day posting requirement is in violation of the FCC competitive bidding rule for the Rural Health Care Pilot Program and will not receive support.

In addition

- (1) Vendors participating in competitive bidding process are prohibited from assisting or filling out the RHCPP Participant's Form 465 see footnote 281 of the [2007 RHCPP Selection Order](#).
- (2) Vendors must complete an RHCPP certification. This requirement is found in paragraph 9 of the [2007 RHCPP Selection Order](#). The template for this certification is available for [download](#).
- () Vendors must retain records for 5 years. This requirement is stated in footnote 277 of the [2007 RHCPP Selection Order](#).

Receive Funding Commitment Letter

When USAC has approved a request for service support (the *Internet Service Funding Request and Certification Form* 466-A, and associated attachments), USAC will send the Project Coordinator and the vendor a Funding Commitment Letter (FCL).

The FCL indicates that the project is eligible for the support specified in the letter contingent upon submitting a *Connection Certification Form* (Form 467).

Funding Commitment Letter Content

The FCL includes the following information:

- Health Care Provider C Number, a unique five-digit code assigned to each pilot project
- C Contact Name person designated as the Project Coordinator
- C Name and Address of the project location supported
- Service Provider Identification Number S N
- Vendor Name
- Funding Year
- Copy of Approved Net or Cost Worksheet
- List of sites where service is being provided
- Type of Service Agreement e.g., contract, tariff
- Eligible Support Start Date: first date the project can receive support based on the *Description of Services Requested & Certification Form* Form 46
- Support End Date, last day service is eligible for support during the funding year
- Estimated Months of Support
- Non-recurring Support Amount
- Monthly recurring Support Amount
- Estimated Total Support Amount
- Funding Request Number, a unique five-digit code assigned by USAC for each project, vendor, and service combination.
- Approved Net or Cost Worksheet items

to be included in the Receive the FCL

Vendors should validate the SPIN on the FCL. This ensures that future support provided by the vendor is credited to the correct SPIN. If the SPIN is incorrect, please contact the Rural Health Care Pilot Program at 1-800-229-5476.

Health care provider support can only be provided after the vendor receives the Support Acknowledgement Letter from USAC.

Receive Support Acknowledgement Letter

USAC sends a Support Acknowledgement Letter to the Project Coordinator (PC) and vendor.

After receiving the *Connection Certification Form* (Form 467), USAC creates a Support Acknowledgement Letter, which is sent to the PC and vendor.

The Support Acknowledgement Letter provides a detailed report of the approved service(s) and support information.

Health Care Provider HCP Support Acknowledgement Letter Content

The HCP Support Acknowledgement Letter includes the following information:

- Funding Year: 2007, 2008, etc.
- Pilot Project Number Also known as a C Number : unique five-digit number assigned to each pilot project
- Funding Request Number: a unique five-digit code assigned by USAC for each pilot project, vendor and service combination.
- Billing Account Number: account code for a pilot project credited with USF support
- Pilot Project Name: name of project being supported
- Pilot Project Address: address of the project being supported
- Pilot Project Billing Organization and Address if different than above
- Service Provider Identification Number SPIN number issued by USAC to a vendor
- Vendor name: name of vendor providing service or equipment to project
- Service: type of service or equipment provided
- Support Start Date: first date PC can receive support based on the *Description of Services Requested & Certification Form* Form 46
- Support End Date: last day service is eligible for support during the funding year
- Support Date: month and year for support amount
- Support Amount: support for the month
- Total: total support for the funding year

This letter verifies that a Form 467 has been received. The support is credited to the Billing Account Number shown on the Support Acknowledgement Letter. A sample [Support Acknowledgement Letter](#) is available for download.

How to Obtain Your Support Acknowledgement Letter

The Support Acknowledgement Letter will be sent to the PC and vendor when the *Connection Certification Form* (FCC Form 467) is processed by USAC.

Once the vendor receives the letter, it can bill the project for services completed. The entity that receives the bill and pays for the service is defined as the billed entity.

USAC requests that vendors check the SPIN on the Support Acknowledgement Letter to make sure it is correct.

Participants should check that the service provided was actually working or installed and is being billed for the time period on the Support Acknowledgement Letter. Be sure that the Billing Account Number listed on the letter is the same Billing Account Number attached to the service and PC location or PC mailing organization and address. This ensures support is credited to the entity paying for the service. If you are unsure whether the Billing Account Number is correct or if you find an error on the Support Acknowledgement Letter, please contact the Rural Health Care Pilot Program at 1-800-229-5476 and do not start applying program discounts.

Send invoice to USAC

Once the vendor provides the service and invoices the project, the Project Coordinator (PC) for each Pilot Project is responsible for approving invoices for the vendor's use. These invoices are based on the approved Funding Commitment Letter. The vendor then signs and returns these pre-filled invoices to USAC.

The Project Coordinator shall also confirm and demonstrate to USAC that the selected participant's 15 percent minimum funding contribution has been provided to the service provider for each invoice. USAC also will review invoices to ensure network deployments are proceeding according to the Participants' network plans.

Where to Send Invoice

Project Coordinators can mail or fax USAC a copy of the [RHCPP Invoice](#):

Universal Service Administrative Company
Rural Health Care Program
100 S. Jefferson Road
Whippany, NJ 07981

Fax Number 973-599-6514 (to the attention of the project coach)

Bi-Monthly Invoicing Cycle

Invoices received from the 1st through the 15th of the month will be processed by the 20th of the month. Invoices received from the 16th through the 1st of the month will be processed by the 5th of the following month.

Example

If an invoice is received January 29 it will be processed during the first five days of February. If an invoice is received February 1, it will be processed by February 20. The date the invoice is received by USAC will be used to determine when the invoice will be processed, not the date mailed by the project coordinator. Once an invoice is processed by USAC, it will take about 10 days to issue payment. If payment has not been received within 45 days of invoicing USAC, please call 1-800-229-5476 to be sure the invoice was received and is being processed.

Invoice Formatting

USAC has designed a sample invoice format that project coordinators and vendors may use in the RHCPP. The [RHCPP Invoice](#) consists of a header and individual invoice line items for each Pilot Program service credited. Support amounts are based on monthly submissions of actual incurred expenses.

Note

USAC has developed an administrative process to streamline the invoice submission and approval process. Please contact the Project Coordinator for additional information on this process.